

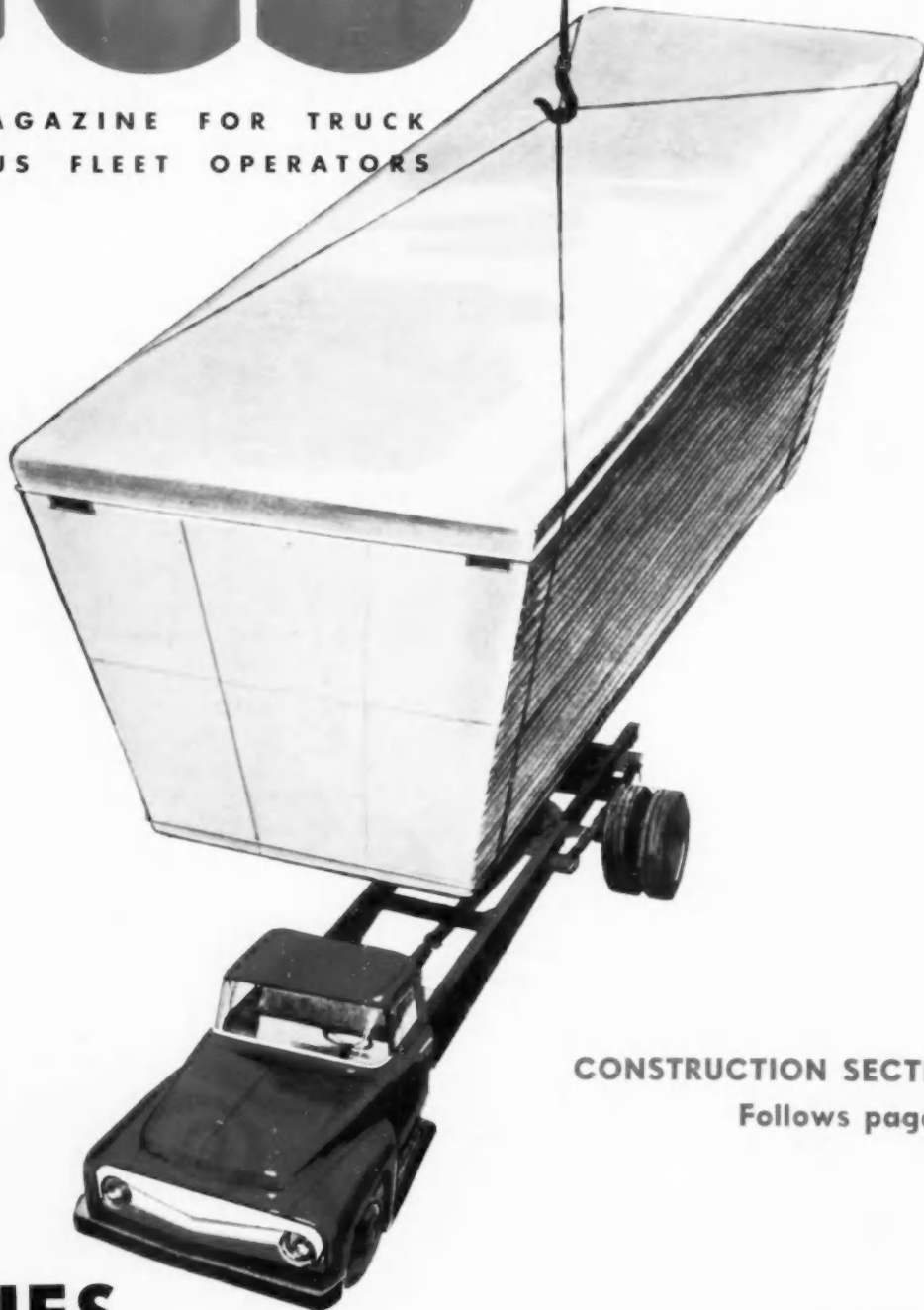
OCTOBER 1957

CCJ

COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK
AND BUS FLEET OPERATORS



CONSTRUCTION SECTION

Follows page 86

BODIES

- Can Be Repaired with Epoxy Resin
- Appearance Boosts Product Recognition
- Fleets Ask for More Space, Less Weight
- Vans on Stilts Keep Power Units Working
- Up-Dating Cleaning and Painting Pays



no matter what kind of fleet you operate...



FORMFLEX CHROME RING SETS

give maximum power and economy

Only Pedrick FORMFLEX Chrome Piston Ring Sets have these important advantages:

Exclusive "Equalizer" construction, providing the utmost in conformability *in any installation.*

Effective cylinder area lubrication without unnecessary waste or wear.

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You'll find it pays to standardize on Pedrick FORMFLEX CHROME Rings.



EQUAL PRESSURE
EVERYWHERE MEANS A
PERFECT SEAL



WILKENING MANUFACTURING CO., Philadelphia 42 and Toronto 2

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opera
is al
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and
forea
the b
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with

COMM



Railway Express Agency installs modern RCA "Split Channel" 2-Way Radio equipment

Looking ahead to new Federal Communications Commission regulations when "Split Channel"* operation becomes effective, Railway Express Agency is already using RCA Narrow Band equipment for dispatchers to keep in touch with pickup-and-delivery trucks en route. Three terminals are now equipped and four more are being installed. "Forewarned is forearmed" . . . and this alert company is ready with the best equipment for the job—RCA. RCA Narrow Band 2-Way Radio equipment meets all proposed regulations of the FCC, with nothing to be added.

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is readily converted in the field to "Split Channel" service.

With RCA you get the greatest number of other benefits including 6/12 volt interchangeability, lowest standby battery drain, low tube replacement costs, color-directed "Rainbow" tuning, high-quality voice transmission, rugged equipment design. Be sure the equipment you buy offers *all these advantages*.

**"Split Channel"—that new system of 2-way radio channeling approved by FCC which doubles capacity now available and is a direct result of development of superior equipment.*

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☐ Have RCA Communications Specialist make a FREE RADIO SURVEY of my business.

COMMERCIAL CAR

—October 1957 • Vol. 94 • No. 2—

This Month's Features . . .

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JOURNAL

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will be remembered long after
the price has been forgotten...”**



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4" x 9" clear glass, rubber rimmed mirror head...completely adjustable...extra swivel assembly on zinc plated extension arms...simple bolt-on installation...G.M.C. truck bracket furnished...3 screw tension adjustment head...Bonderized...finished in rock hard black baked enamel.



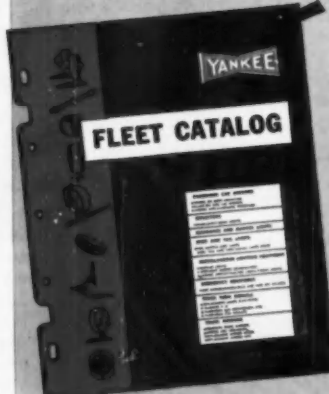
#78 ARMORED CLEARANCE LIGHT

Lightweight, rustproof, heavy-duty. Aluminum base and housing...fade-proof plastic lens...height 1 3/4", with 2 5/32" length 5 1/4"...lens and mounting holes interchangeable with standard equipment...baked aluminum finish. Available with red or amber lens...#63, 3 c.p. 6 volt bulb. Also available in 12 volt.



#382 UNIVERSAL STOP AND TAIL LAMP

Double filament bulb—3 c.p. for tail lamp and 21 c.p. for stop light...approved reflex lens #256...plastic license illumination lens #3148. Complete with plug connector, wire leads and mounting hardware...Bonderized...finished in black baked enamel...overall diameter 3 1/4"...#1158 6 volt bulb. Also available in 12 volt.



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"Driver McMountain wants to know who goofed.
His new cab came in without a full-depth Airfoam seat!"

Airfoam—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

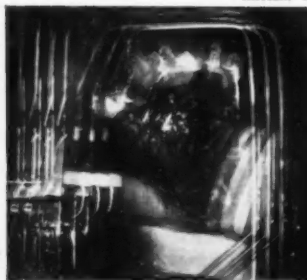
Now full-depth AIRFOAM seats ►
increase driver-efficiency, cut costs:

You can specify Full-Depth
AIRFOAM seats and backs as
original equipment on any truck!
But be sure it's



Airfoam
MADE ONLY BY
GOODYEAR

The World's Finest, Most Modern Cushioning



MULTIPLE-EXPOSURE PHOTO shows how the usual spring-and-padding type cushions amplify drags and jars. Also, time-lag in spring-action causes driver to bounce up as controls come down. Trying to compensate, driver cramps muscles, frazzles nerves, drains efficiency. Cushions wear out, too!



SAME CAB WITH FULL-DEPTH AIRFOAM SEAT AND BACK. Over half-a-million fresh air cushions per cubic inch absorb drags and jars, keep driver's motion in step with controls. Result: Fresher, cooler, more efficient drivers. Cushions, being all one piece, don't sag, snag, break down or ruin covers.

Goodyear, Automotive Products Dept., Akron 16, Ohio

THE OVERLOAD

E D I T O R I A L C O M M E N T

The Mope: Prime Target for New Safety Campaign

CONSIDER THE MOPE—a major menace to highway safety. We've forgotten who coined the word. But its meaning is simple—he's the motorized dope.

He is easily recognized on any U. S. highway. He may be running 30 in a 50 mph zone. Sometimes he stops on a superhighway, even backs up to an interchange. Often he rides the inside lane of a four-lane highway (well below the speed limit). Every now and then he turns left from the outside lane or right from the inside lane. And *always*, he drives with complete disregard to what's going on around him.

Seldom does he actually break the law. Still less often is he ever arrested or even warned of the danger he creates. And most safety campaigns don't even admit that he exists.

Yet we submit that the mope is the primary *cause* of a very high percentage of all accidents. Sure enough, usually he is not *legally* responsible. The blame always goes to the guy who gets in trouble when he passes him . . . or hits him when he stops. But all too often it's the mope who *started* the trouble, long before it happened.

At the start of every weekend our radio blares forth: Slow down and live; Slow down and keep your license; Take it easy!

But when did you last hear or see the more positive approach? When did the man last say: Stay alert; Keep on the ball; Move at a speed consistent with traffic flow; Make a turn only when you know it's safe?

Sure, speed is the real killer. But speed can't

kill until there is an accident. And reasonable speed alone doesn't very often *cause* an accident. There are exceptions, of course, particularly of the single-vehicle accident type. But if we could eliminate the mope we would go a long way toward cutting down on accidents.

Fortunately, the mope is not the direct concern of either the truck or the bus industry. Rare indeed is a mope at the wheel of a commercial vehicle (some city delivery drivers excepted). But both industries have to live with him on the road.

An organized campaign against the mope could pay real dividends. And there are at least three reasons why NOW, in early October, is the time to do it.

1. Mopes thrive best in the heat and heavy traffic of summer months. His image is real and fresh to every thinking motorist.

2. The truck industry is deep in the midst of putting its own house in order with regard to ICC safety regulations and resultant adverse publicity. It's a golden moment for an effective counter campaign.

3. Safety organizations from the smallest city group to The President's Committee for Traffic Safety are organizing meetings in the immediate future.

The very least we can do as an industry and as individuals is to get the mope on the agenda of all safety groups—begin in Hometown, U. S. A. And the ultimate goal is to cure him or get him off the highway.

Bart Rawson
Editor

"Texaco Lubricants are a big factor in keeping maintenance costs low..."

...and in extending time between overhauls,"

says M. E. Hylton, V.P. and General Manager, Continental Western Division, Transcontinental Bus System, Inc., and Continental Pacific Lines, Inc.



TEXACO



"Our buses operate in the states of Washington, Oregon, California, Arizona, New Mexico and Utah," continues Mr. Hylton. "That means long runs in desert heat as well as rugged mountain driving. It's why all of our buses—diesel and gasoline—are 100% Texaco lubricated and fueled. And because of our past experience, the 48 new buses that will shortly expand our fleet will be Texaco lubricated from the day they're delivered."

Here are good reasons why you, too, can depend on Texaco: Take, for example, multi-purpose *Texaco Marfak Heavy Duty Special 2*—the new lithium-base grease. It stays in the bearings, even under toughest conditions. Requires no seasonal change.

Where conditions do not require an all-

purpose lubricant, there's *Texaco Marfak* or *Texaco Marfak Heavy Duty*. They will not pound out, and they stand up through severe temperature changes, protect against wear and corrosion.

For transmissions and differentials use *Texaco Gear Lube Heavy Duty*. It gives smoother, quieter operation, extends gear life.

There is a full line of Texaco lubricants to give your bus or truck fleet more full-power mileage between overhauls, keep maintenance costs to a minimum. Your Texaco Lubrication Engineer can suggest the best ones to fit your operating conditions. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

Lubricants and Fuels

FOR TRUCK AND BUS FLEETS



AT LAST!

**A set that will
hold oil
in any engine**

He's talking about Sealed Power KromeX piston ring sets with the new Stainless Steel oil rings!

This oil ring is side-sealing . . . independent of the contour and depth of piston groove . . . immune to tension loss at engine operating temperature. It will not corrode . . . sludge. Chrome-plated steel side rails in the oil ring for more than double normal ring life. They seat instantly!

Available in KromeX ring sets for engines which require super oil rings for top performance.



U. S. Patent No. 2,789,872

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power KromeX Ring Sets

BEST FOR RE-RING!

BEST FOR RE-BORE!



"Wha' Done It?"

BRAKE FLUID failure was the cause of this accident. According to the driver, this vehicle was being driven in heavy traffic requiring multiple stops when the brakes suddenly failed. When the damaged vehicle was checked, the brakes appeared normal.

Leading automotive manufacturers and the Society of Automotive Engineers have warned that only "heavy duty" brake fluids be considered for service work. As a matter of fact, SAE has withdrawn its approval of "moderate duty" brake fluids because they're "considered dangerous for bigger, more powerful cars and trucks of recent vintage."

In special tests conducted by the SAE, it developed that a 1957 vehicle weighing 4000 lb and stopped repeatedly at high speeds may generate brake fluid temperatures of 250° or greater. At this temperature brakes with "moderate duty" fluids can fail. SAE specifications for moderate duty fluids sets the minimum boiling point at 235°. For heavy duty fluids, the minimum is 300°.

Hydraulic brake systems fail when the fluid

begins to turn to gas as it boils. And gases, unlike fluids, can be compressed. Even a small amount of gas in a brake system can act as a "cushion" to prevent transmission of pressure from foot to brake shoe. *Failure is generally total.* "Phantom failure" like this one occurs.

On a hot day, brakes may fail between traffic lights after heavy stop-and-go driving. During the time between brake applications, heat is transferred from brake drum to fluid, causing boiling and failure without warning. When the brakes cool down they return to normal.

Removing Grease from Brake Lining

OUR SHOP visits have revealed that some mechanics are still trying to remove brake fluid and grease from brake lining. Some choose to wash the brake lining in gasoline, while others are hand sanding the lining in an attempt to remove the imbedded grease and oil. In some instances we have seen mechanics soak the brake shoe in gasoline, then ignite it with the firm belief that the flame will burn the lining free of grease and oil.

Removal of grease and oil from brake lining just can't be done! It is, however, possible to remove them from the surface. But as the vehicle is driven, the heat of the braking draws the absorbed oil and grease to the surface again. If oil or grease soaked lining is found, repair the cause of the leak and install new lining.

Battery Gases Are Explosive

THE GASES issuing from a charging battery are a mixture of hydrogen and oxygen and will explode with great violence and spraying of acid if a spark or flame is brought too near them. The gases are not dangerous when diluted sufficiently with air but a room or engine compartment where charging batteries are confined should be ventilated. Do not bring a flame or spark near vent openings until gases have been cleared from cells by blowing air into them gently.

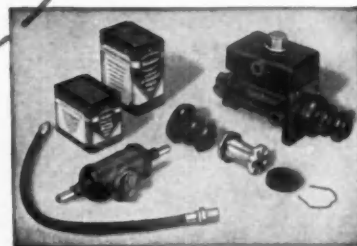
When restrictive self-leveling devices are used in the vent openings and the liquid is "full" level, withdraw (temporarily) enough electro-

(TURN TO PAGE 12, PLEASE)

PROTECT YOUR



**ALL WAGNER
PRODUCTS ARE
TOP QUALITY!**



WAGNER LOCKHEED HYDRAULIC BRAKE PARTS line is the most complete on the market. For example, Wagner Hydraulic Brake Cylinders are available in types for practically all makes and models of cars and trucks... 285 numbers of master cylinders and 411 numbers of Wheel cylinders. Available as cylinders only, or in Repair Kits. For details, see Catalog AU-1.

Wagner Lockheed
the best known name in brake service



EQUIPMENT!

use **Wagner Lockheed** **HYDRAULIC BRAKE PARTS** ...identical to original equipment

You can safely stake your reputation on the performance of Wagner Lockheed Hydraulic Brake Parts... They are tops for quality, and they are dependable.

From the selection of raw materials to final packing, the quality of these brake parts is rigidly inspected and carefully guarded. Wagner does this to provide you with the finest brakes available anywhere.

Wagner Lockheed Brake Parts—cylinders, pistons,

springs, washers, cups, boots, hose, etc., marketed for replacement needs are identical to original equipment. These parts are manufactured to the same specifications, by the same machinery, as Wagner-made parts used in complete assemblies for original equipment.

You'll find that the Wagner Lockheed line of hydraulic brake parts is the most complete on the market. Every make and model vehicle is covered. Parts are available individually or in factory sealed kits.

You can save time by getting all your brake service needs from one source



WAGNER LOCKHEED HYDRAULIC BRAKE FLUID is chemically balanced to function perfectly in all seasons and under all operating conditions.



WAGNER CoMaX BRAKE LINING is unsurpassed for quick, safe, smooth stops, and extra long service life. Available in sets, rolls, blocks, slabs, cut segments.



WAGNER SHOE EXCHANGE SETS are available with "bonded-on" or "riveted-on" Wagner CoMaX Brake Lining, with both standard and over-size lining thicknesses, for all popular cars and light trucks.

WAGNER LOCKHEED BRAKE PARTS,
FLUID AND LINING...AIR BRAKES...AIR HORNS...
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P57-1F



City of Madison, Wisc., reports on full year's fleet-washing with Oakite Foam-Spray Unit:

**"Washing over 300 vehicles
in only 1/3 former time!"**

Vehicles in the municipal garage in Madison, Wisconsin, are always checked out sparkling clean. Whether they come in for greasing, repairs, or just a change of oil, they get a quick washdown with the Oakite Foam-Spray Unit charged with Oakite No. 70 detergent. It's part of the regular schedule, like checking tires.

It wasn't this way when washing was done by bucket and brush. The Oakite Foam-Spray Unit cuts cleaning time by a full two-thirds . . . makes it possible to incorporate a wash in the regular schedule with no increase in manpower.

And here's the extra pay-off. At year's end, with vehicles washed better and more frequently, the records show a *lower* total cost for detergent.

Find out how the Oakite Foam-Spray Unit can cut *your* fleet-washing costs. Talk to your local Oakite man, or write for details to Oakite Products, Inc., 52G Rector Street, New York 6, N. Y.



Export Division Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

CCJ

AT YOUR SERVICE

Continued from Page 9

lyte so that the hydrogen gas trapped in the cell can be blown out with a gentle stream of air.

Due to the presence of impurities in all automotive battery cells, small quantities of hydrogen gas are given off at the negative plates even when the cells are not being charged. It must be assumed, therefore, that hydrogen gas may be present within the cells at all times. A torch, match flame, lighted cigarette or sparks from metal tools accidentally laid across the terminals might cause ignition of hydrogen. To avoid sparks do not disturb connections between batteries while charging—throw switch "off" at charger first.

The possibility of ignition of hydrogen gas by static electricity accumulated on the car or on one's person and discharging near the vent openings can be minimized if, immediately before working on the battery, a metal rod or wire is touched to the car bumper and to the ground.

If for any reason, acid electrolyte should be spattered in the eyes, wash it out immediately with copious quantities of clean, cold water cupped in the hands. Seek medical aid at once.

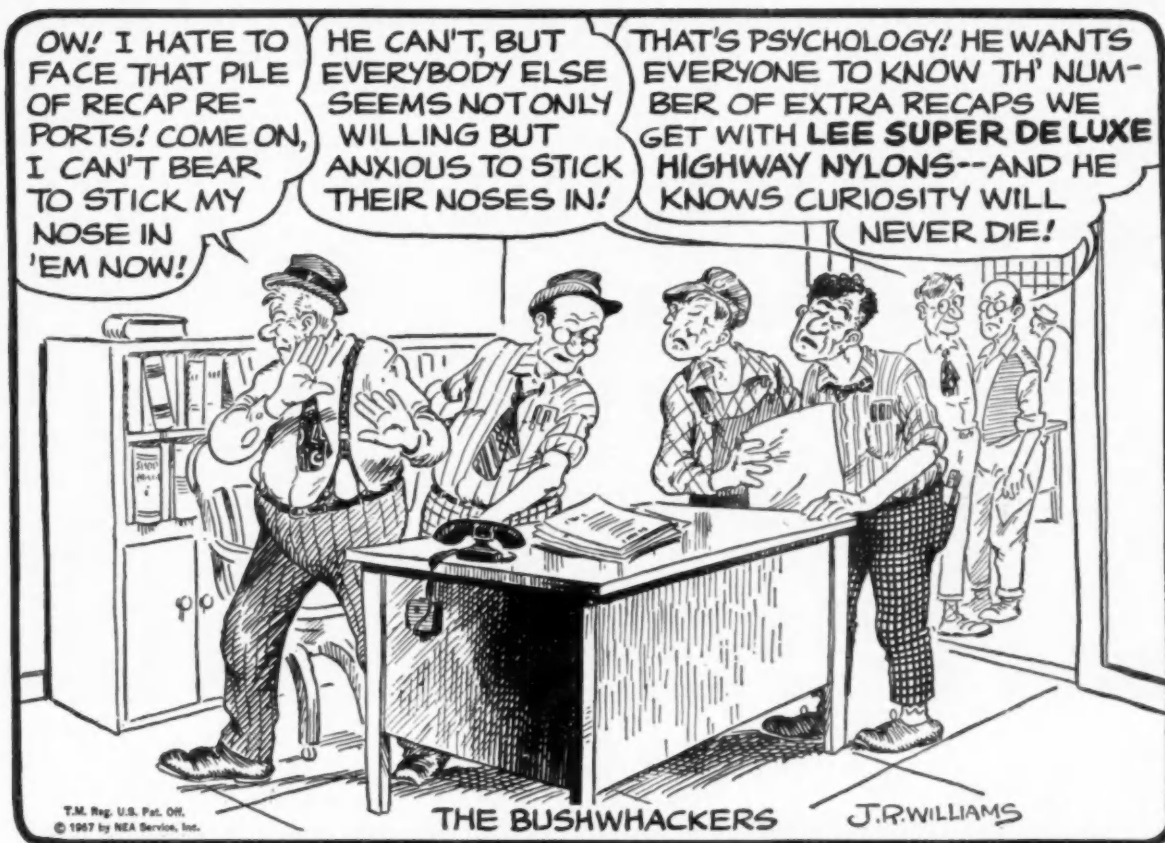
Buses Use Rubber U-Joint

CITY OF PHOENIX (Ariz.), Division of Mechanical Maintenance, has replaced metal-type steering universal joints with rubber



mounted-type joints. According to Superintendent W. W. Rote, this conversion was undertaken in an attempt to eliminate gear noise and road shock on GMC Model TDH-45-12 Buses. To date, each of these buses has traveled more than 175,000 miles since the changeover, and drivers have noted improved steering, elimination of gear rattles and reduction in road shock.

(TURN TO PAGE 16, PLEASE)



MORE MILES PER DOLLAR

with Lee Super DeLuxe Highway Nylons—they give you more recaps!

The Lee Super DeLuxe Highway Nylon Truck Tire costs less per mile. That's because its premium features result in long original mileage and greater carcass strength for multiple recaps.

The extra-strong, extra-tough nylon cord provides maximum protection against impact bruises, blowouts and moisture damage. Nylon gives you a cooler-running tire, too, because there is less bulk. All cords are treated by Lee's exclusive double-dip Flexlok process which reduces heat, resists the effects of repeated flexing, and makes cord separation from the rubber bond practically impossible.

Every component of the tread design contributes to maximum mileage, better traction and cooler running. Only

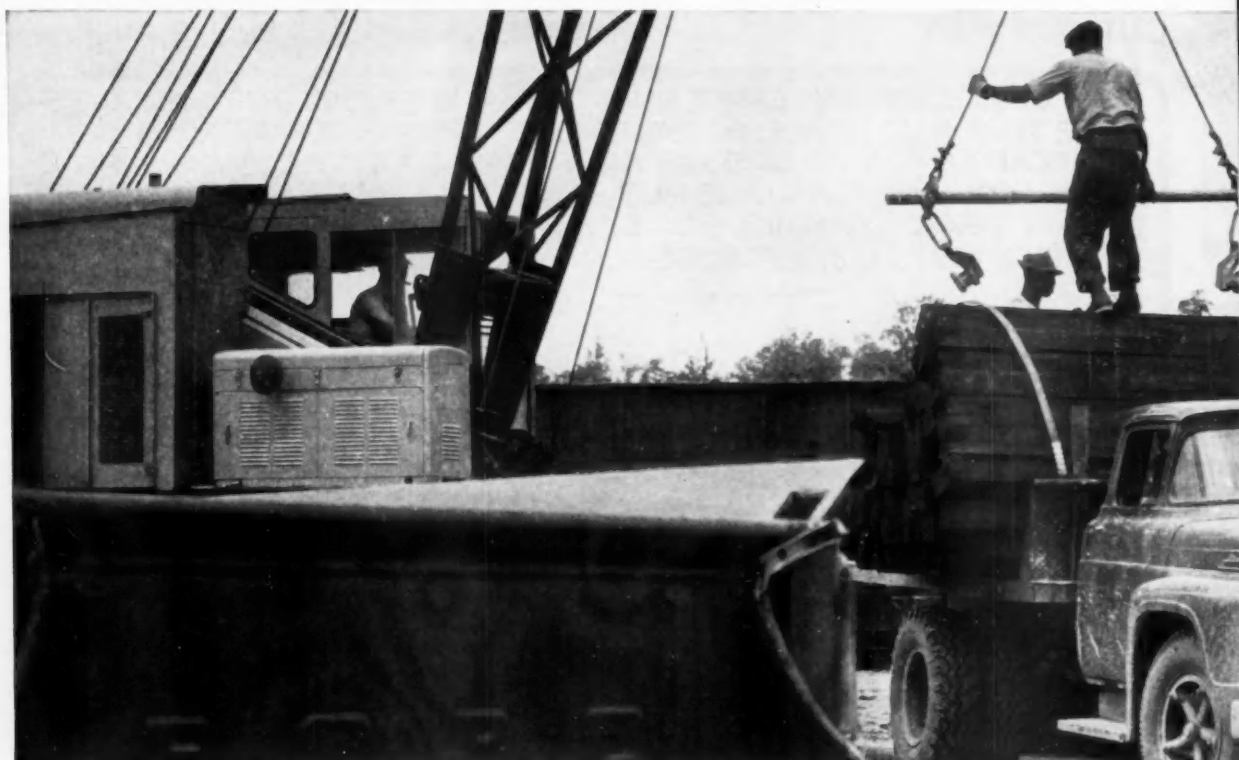
the best grade of Smoked Sheet natural rubber is used. The flat contour and the deep tread put more rubber on the road to distribute the load and increase tire life. Angular center-tread grooves and the bars between the ribs help prevent little cuts from becoming big cracks.

Lee Super DeLuxe Highway Nylons—tubed or tubeless—are an outstanding tire buy! Write direct, or look for "Lee of Conshohocken" in the Yellow Pages of your Telephone Directory.

* * *

The complete Lee line, shown below, includes a tire which will lower your operating costs by giving longer life, more recaps. Let us prove it to you.





Millions of miles a year—

GENUINE FORD PARTS KEEP 'EM WORKING ON THE RAILROAD!

"We depend on Genuine Ford Parts to keep our 331 Ford trucks rolling," says Mr. M. C. Taylor, Engineer of Work Equipment, Louisville and Nashville Railroad. "They save us time and money because they last longer and install quickly and easily. And we can get Genuine Ford Parts wherever our trucks operate."



You
truck
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You'll find fleet managers everywhere keep their Ford trucks on the job with Genuine Ford Parts. They know that it's just plain good business sense.

For when you install quality Ford parts, you're cashing in on that same Ford engineering that designed and built your Fords. That's because Genuine Ford Parts are made to rigid specifications drawn up by Ford engineers and designers, and they are held to these high standards by rigid quality control during manufacture.

It all adds up to one fact: Genuine Ford Parts are made right, to fit right, to last longer. They're available through Ford Dealers everywhere. And remember, Genuine Ford Parts cost no more!

**Keep your fleet
on its feet!**



Warm up cold motors **FAST!**



New Super-Hot
SUREFIRE
MOTOR
STARTING FLUID

Starts Any Gas or Diesel
Engine, with TLC*

*Tender Loving Care



Economical Pint Can

That's right! The new, patented, low-ether formula SUREFIRE is safe...protects your engine against expensive upper cylinder damage and reduces engine wear by eliminating slow, hard starts all year 'round. The cheapest engine starting insurance you can buy. Tested and approved by major oil companies. Approved by NYC Fire Dept. Meets all ICC requirements. SureFire Starter Sprayer is available for easy application of bulk fluid.

- ✓ Prolongs battery and starter life
- ✓ Prevents crank case oil dilution
- ✓ Eliminates expensive standby time
- ✓ Reduces maintenance cost
- ✓ Operates to 65° below zero

Double-your-money-back guarantee. Sold at all leading automotive construction equipment and mill supply dealers. Try it today.



SureFire also comes in Handy 11-oz. Pushbutton Can

WILCO COMPANY
INDUSTRIAL & COMMERCIAL DIVISION
4425 Bandini Blvd., Los Angeles 23, California
surefire is especially effective for starting
2-cycle engines

CCJ AT YOUR SERVICE

Continued from Page 12

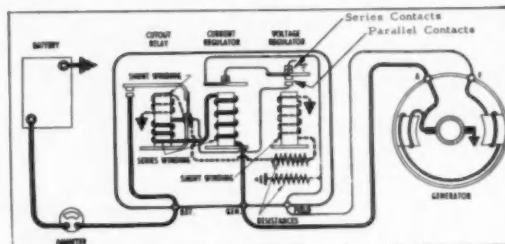
Reaming Valve Guides

SOME FLEET men who encounter valve sticking problems find it very tempting to increase stem to guide clearance. Presumably they are under the opinion that by increasing the guide diameter the valve will float more and thus produce a possible cure for valve sticking.

What they fail to realize is that when a valve is allowed to float in the guide, the guide loses control of the valve stem to a point where the valve will strike the seat unevenly, causing undue wear on the valve stem. Also, guide clearance has considerable influence on valve operating temperatures as the valve is cooled through the valve guide.

Double Contact Regulators

BEFORE ANY service man attempts to check out a double contact regulator he should be reasonably sure he understands the theory of the regulator. Field reports have revealed that some



regulators have been damaged by grounding out the field circuit (in the customary manner) during test procedures.

During low speed and heavy generator loads, the voltage regulator operates on the series contacts (upper). At higher speeds and lighter generator loads, the voltage regulator operates on the parallel contacts (lower).

With the battery in a fully charged condition and the engine operating at 1500 rpm, install a tester in the charger circuit and cycle the regulator by turning the variable resistance to the opened position and then back to the direct position. The voltmeter reading will show the normal operating voltage on the lower contact operation. Next, slowly turn the generator field control toward the open position while watching the voltmeter. The voltmeter should drop off 0.1 to 0.5 volts, and then remain steady, indicating upper contact operation.

For a current regulator check, turn the variable resistance to the open position, remove the
(TURN TO PAGE 20, PLEASE)

Tubeless Tires Score Again



— And so do **Goodyear Rims**

NOTHING'S tougher on tires—or rims—than running over jagged rocks, as you may have good reason to know.

That tubeless tires can be used on such a job, and so effectively, is in large measure due to Goodyear's development of rims to fit every type of vehicle, from the smallest truck to the largest earth-mover.

Goodyear's matchless experience in building rims for every type of vehicle has produced numerous advances. When you specify Goodyear rims you get:

Unusual Strength: Thanks to an exclusive double-welding process, and added support at points of greatest stress, present-day Goodyear Rims are far stronger than previous rims.

Ease of Tire Mounting: No tube and flap troubles.

Special Tools: Goodyear alone provides both hydraulic and hand tools especially made for off-the-road equipment.

Bond-a-Coat Finish: This protective coating affords long-lasting resistance to rust and corrosion.

Got a truck rim problem? Goodyear will help you solve it.

If you have a rim problem, why not talk it over with the G.R.E. (Goodyear Rim Engineer). He'll save you time and money by helping you select the type and size of rim best suited to your needs. Write him at Goodyear, Metal Products Division, Akron 16, Ohio, or contact your local Goodyear Rim Distributor.

Buy and
Specify

GOOD YEAR

MORE TONS ARE CARRIED ON GOODYEAR RIMS THAN ON ANY OTHER KIND



REDUCED ROAD DELAY helps E. & L. Transport Company make deliveries on time—helps them serve their customers better. Nylon cord guards against every major cause of tire-carcass failure—helps eliminate lost time on the road.

THIS FLEET OPERATOR REPORTS:

“50% LESS ROAD TROUBLE WITH NYLON CORD TIRES”

“Cost of tire failures runs high when you measure it in terms of delays to drivers and equipment,” says Walter Cruse, Operations Manager, E. & L. Transport Company, Dearborn, Michigan. “Nylon cord tires have practically eliminated tire failures caused by blowouts. Result: a 50% reduction in road delays due to tire trouble. We get a positive saving, because drivers have fewer delays and fewer calls are needed for outside service.

“E. & L. Transport Company’s fleet of nearly 2,000 vehicles hauls cars, trucks and tractors over every conceivable road surface in all 48 states,” continues Mr. Cruse. “Temperatures range from -40° to over 110°. We give tires just about the toughest kind of service they can get, and we think nylon cord tires are the best truck tires made.”

PROVE TO YOURSELF that the advantages of nylon cord tires can add up to big savings under your load and road conditions. Ask your dealer about nylon cord tires today. Du Pont makes the tough, long-lasting nylon. Nylon cord tires are available from all tire makers.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



**FOR TRUCKS AND PASSENGER CARS, TOO . . .
THE STRONGEST, SAFEST TIRES ARE MADE WITH NYLON CORD**

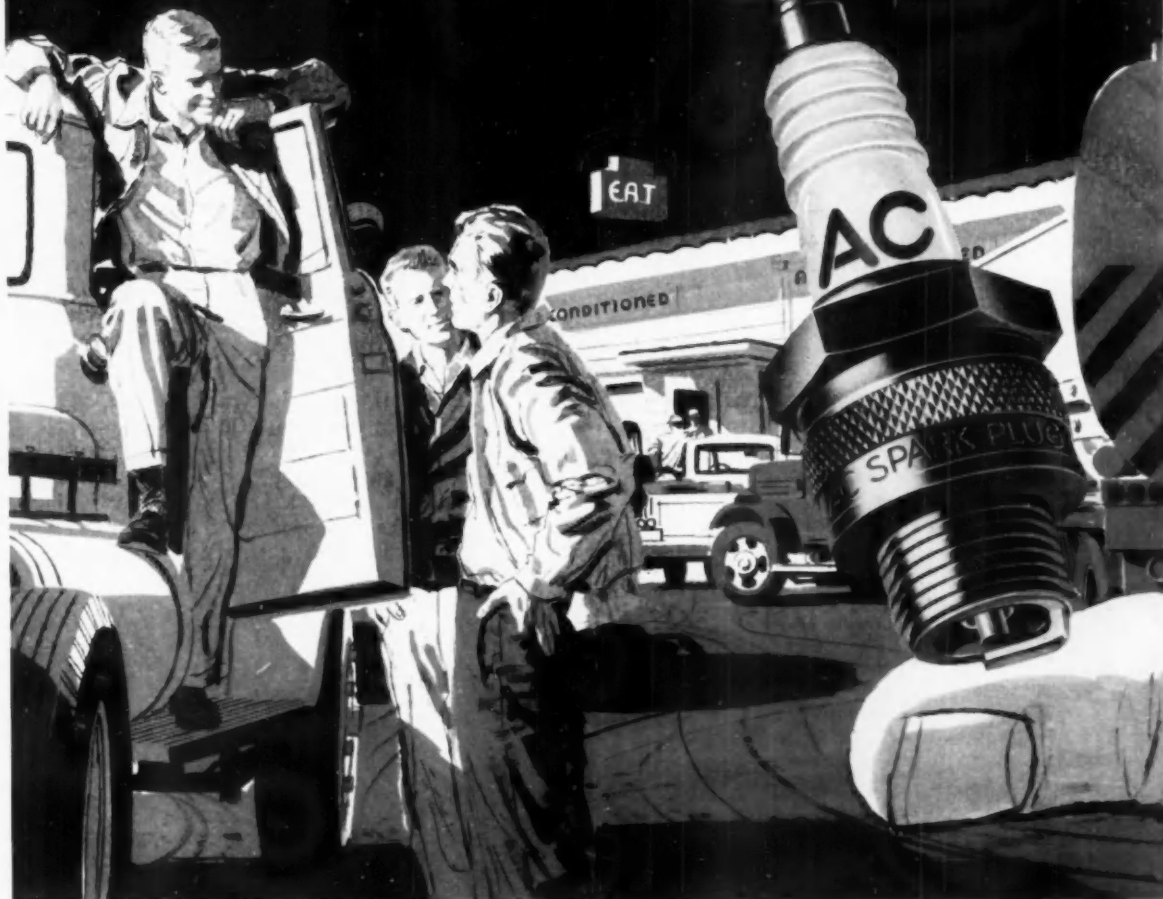


OVER-ALL ECONOMY. Fewer tire failures, fewer road delays and fewer costly repairs have meant greater over-all economy for E. & L. Transport Company.



NYLON REDUCES TIRE DAMAGE from impact, because tough nylon cord shrugs off road shocks. Nylon has the lasting strength to protect against costly blowouts.

**"Talk of the
coffee stops"**



**A new set of ACs can save
many times their cost in gasoline!**



When drivers get together at a coffee stop, and trucks are being gassed up, talk often gets around to gasoline economy. And, right along with it the conversation turns to spark plugs . . . particularly to AC Hot Tip Spark Plugs. The word has gone the rounds, from the Jersey Turnpike to the western end of Route 66, that ACs "Hot Tip" feature burns away combustion deposits as soon as they form. This anti-fouling action insures more efficient fuel combustion, pays off in longer plug life. That's why they're real money savers. Put new AC Hot Tips to work in your fleet, too!

AC  THE ELECTRONICS DIVISION OF GENERAL MOTORS

ACTION
starts with



**HOT TIP
SPARK PLUGS**

Watch Walt Disney Studios' ZORRO
every week on ABC-TV

Continued from Page 16

ammeter lead attached to the battery and connect this ammeter lead to ground. Turn the variable resistance back to direct position. With the engine operating at 1500 rpm, the highest reading observed on the ammeter is the current regulator setting.

If volt-amp tester is not available, connect ammeter into charging circuit between battery terminal on regulator and battery wire. Turn on all lights, heater, and electrical accessories so as to drop the system voltage at least one volt below regulator setting. Note current reading on ammeter, this will be your current regulator setting.

High Temperature Aid

INTERNATIONAL has announced availability of a stainless steel manifold plate to be installed between the intake and exhaust manifolds on vehicles equipped with BD264 engines. Purpose of this plate is to direct engine exhaust heat away from the intake manifold when high surrounding temperatures are encountered. This

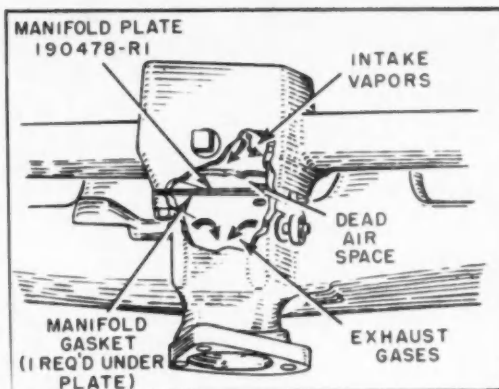


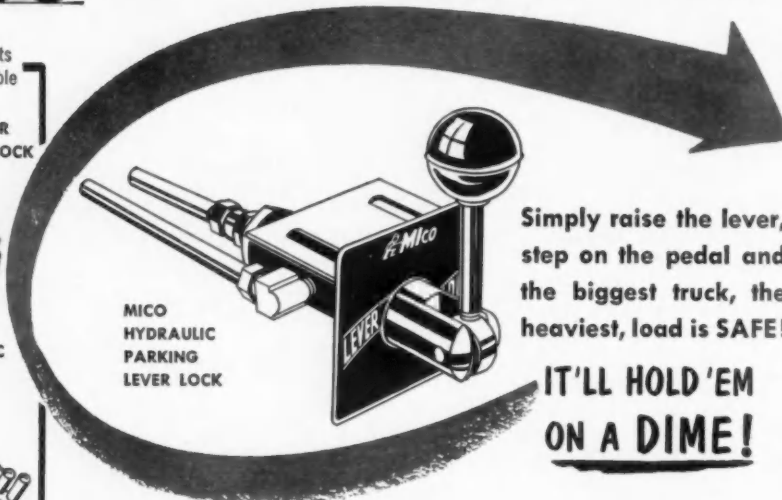
plate may be installed on older BD264 engines where loss of power or low fuel mileage can be attributed to high engine operating temperatures. This plate is also applicable to BD220 and BD240 engines.

LP Gas Oil Change

HERE IS a tip from International Harvester Co. Subject: Oil Change On LP Gas powered V-8 engines. It is recognized that engines operating with LP gas equipment are usually much cleaner internally and that the general practice is to extend oil change periods on these engines.

(TURN TO PAGE 24, PLEASE)

MICO HYDRAULIC PARKING LEVER LOCK



- EASY MANUAL RELEASE
- NO ROLL BACK EVER!
- WILL NOT INTERFERE WITH A NORMAL BRAKING OPERATION
- SIMPLE TO INSTALL
- SELF SEALING HYDRAULIC CHECK VALVE DESIGN

Write for information on all MICO Brake Products

MINNESOTA AUTOMOTIVE, INC.

1101 NORTH FRONT ST.
MANKATO, MINNESOTA



Have you tried Grey-Rock

"TIMBER KING" BLOCKS?

The molded-woven combination blocks that increase lining life, overcome heat fade, reduce drum breakage on toughest runs



For years operators of big rigs on the toughest runs have looked for longer lining life, less heat fade, better braking, fewer broken drums. Now, with "Timber King" sets, Grey-Rock answers these problems.

"Timber King" blocks have shown extraordinary results under the roughest conditions on the road. The secret is the woven block used in combination with the right molded block. A special weave, which provides slight compressibility of the woven material, assures

full lining-to-drum contact, eliminating localized high temperatures. A special alloy of zinc wire in the woven block tends to dissipate heat from the braking surface and conditions the drum.

Many fleet brake problems can be licked with regular Grey-Rock blocks. But where braking conditions are severe—where something for heavier and more rugged service is needed—Grey-Rock "Timber King" blocks are the answer. Ask your Grey-Rock jobber about them.

Only **Grey-Rock** makes **BALANCED BRAKSET LININGS**

BALANCED BRAKSETS • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS
GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.



RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Mechanical Packings • Asbestos Textiles • Industrial Rubber • Sintered Metal Products • Engineered Plastics • Rubber Covered Equipment • Abrasive and Diamond Wheels • Laundry Pads and Covers • Bowling Balls • Industrial Adhesives

With **GREY-ROCK**
you can...



SEE the Difference

See the difference in the many friction materials Grey-Rock uses. For light trucks—Balanced Trucksets, in distinctive woven and molded combinations, or in all-woven or all-molded sets. For heavy jobs—Balanced Blocks in combinations of molded materials, and "Timber King" molded-woven sets. All specially engineered for each make and model.



FEEL the Difference

Feel the difference in faster, smoother brake action—minimum fade—quicker water recovery—and a good pedal that assures driver peace of mind. Grey-Rock gives you the superior braking features you want and need.



SAVE the Difference

You save because Grey-Rock Balanced Brake Blocks and Balanced Trucksets give more miles between relines—longer drum life—better tire wear—less labor and downtime. See your Grey-Rock jobber.



Outside Adley Express Company's main terminal in New Haven, Connecticut

Adley Express Company, one of the largest motor **RAYON CORD**

Almost 2,000 cities and towns from Cambridge, Mass., to Suffolk, Va., are served by Adley Express Company's 1,000 vehicles. Over 90% ride on RAYON CORD TIRES.

Adley Express finds Rayon Cord Tires pay off in greater mileage—average original mileage is 55,000 with an average of one recap per tire. This adds an

average of 35,000 miles to the original mileage.

Adley Express also finds Rayon Cord Tires pay off in less downtime loss. The average is one hour per vehicle per year. A strict daily inspection policy plus Rayon's greater strength helps keep this figure low. Because Rayon Tires are so reliable, Adley Express saves by having fewer tires on inventory. On the



Inspector checks a Rayon Tire that has already seen much mileage; finds many more miles ahead.



Mr. Ralph Adley, Director of Maintenance, looks over a new shipment of Rayon Tires.



Adley Express, one of the most progressive truckers in the U.S., is always experimenting with new equipment. Here is a unique three-wheel tractor for local delivery. This tractor uses a special 15-foot trailer and a 4-cylinder motor at the rear of the cab. It can turn around in 19 feet! And it is equipped with rayon cord tires.

carriers along the Eastern Seaboard, proves

TIRES PAY OFF!

average a low 3 per cent inventory is kept.

In every way Rayon Cord Tires pay off. As Ralph J. Adley, Secretary of Adley Express, puts it: "Economy and safety are prime factors governing our tire purchases. I feel the Rayon Cord Tires combine these two important specifications, resulting in tire runs of up to 100,000 miles with safest of operating conditions."



Records show that more truckers use **RAYON CORD TIRES** than any other. They can rely on Rayon because Rayon pays off!

AMERICAN RAYON INSTITUTE, INC.
350 Fifth Avenue, New York 1, N. Y.

Continued from Page 20

However, extending of oil change periods on V-8 engines should not be permitted. Continued use of motor oil depletes the oil additive levels. Since additive levels are very important, it is recommended that the oil change periods for LP gas equipped V-8 engines be the same as those established for V-8 gasoline engines.

Excessive Oil Consumption

EXCESSIVE ENGINE oil consumption is sometimes traceable to a leaky vacuum pump diaphragm permitting oil to be sucked from the crankcase into the inlet manifold. If the engine suddenly begins to use an excessive amount of oil, check the vacuum pump before going into expensive engine disassembly.

One method of checking the diaphragm is to connect a vacuum gage to the inside of the booster pump which is connected to the windshield wiper, being sure that the vacuum gage connection to the vacuum pump does not leak air. Remove the tubing between the vacuum pump and the intake manifold and plug the in-

take manifold. Then remove the fitting from the outside of the pump and start the engine.

When the vacuum being developed by the pump reaches its maximum value as indicated by the vacuum gage, screw a pipe plug tightly into the outlet side of the pump to prevent valves that may be leaking inside the pump from causing vacuum gage reading to drop. Then stop the engine. If the diaphragm is OK, the vacuum gage needle will remain absolutely stationary at the maximum vacuum reading.

Caution: Do not remove the vacuum gage until after the engine has been stopped or the plug has been removed from the outlet because running the vacuum pump with the outlet plug in the inlet opened can rupture the diaphragm.

Pressure Test for Acid Leaks

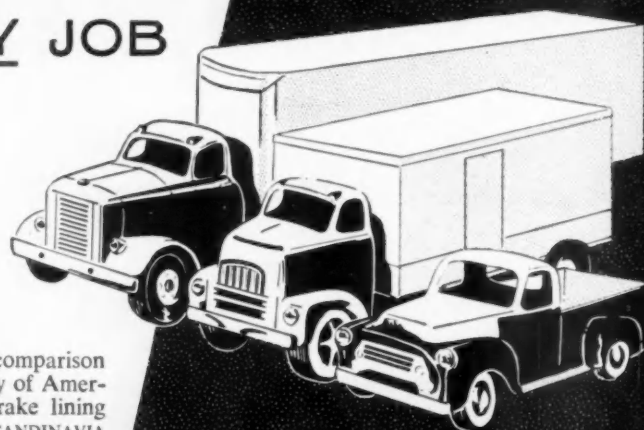
AT THE CONCLUSION of a battery charge, wash off the battery and dry it. If sealing compound is rough and uneven, a gentle flaming of it will improve the appearance. Close examination while flaming may reveal deep cracks or loss of adhesion of seal to box or covers. If acid seeps from these cracks, battery should be resealed with new compound.

A pressure pump (made from a battery filler syringe by running the hard rubber tip through a large one-hole rubber stopper) can be used to

(TURN TO PAGE 28, PLEASE)

SCANDINAVIA —FOR EVERY JOB

From your largest rig to the smallest, a SCANDINAVIA BRAKE LINING is specifically engineered for each job. Whether your operation is cross-town or cross-country—SCANDINAVIA's experience pays off in lowest cost-per-mile brake lining maintenance. SCANDINAVIA ZT-MOLDED COMBINATION brake block sets have set unequalled top standards of comparison—proved over and over again on many of America's leading fleets. If you have a brake lining problem—get in touch with your SCANDINAVIA distributor or write us for his name. On your next tough job, test-install SCANDINAVIA.



BRAKE
BLOCKS

• **SCANDINAVIA** •

BRAKE
LININGS

DIVISION OF SCANDINAVIA BELTING COMPANY, 744 BROAD ST. (P.O. BOX 464) NEWARK 1, N. J.
WAREHOUSE: 250 CENTRAL AVE., NEWARK 1, N. J. • PLANT: CHARLOTTE 1, N. C.
BRANCHES IN CAMBRIDGE, MASS., INDIANAPOLIS, INDIANA AND CLEVELAND, OHIO



Wheeler...94-year transportation veteran...selects Fuller Transmissions

Wheeler Transportation Company, a Division of Consolidated Freightways, Inc., was established in Menasha, Wisconsin in 1863 . . . the first transportation company to provide shippers with regular commercial hauling in the Fox River Valley area. Today, expanded operations include overnight service between central and southern Wisconsin points, and the Twin Cities of St. Paul and Minneapolis, Minnesota.

Wheeler relies upon Fuller Transmissions to help maintain its reputation for fast, dependable delivery of all types of cargo through varying

conditions of time, traffic and terrain. A new fleet addition of 30 International Tractors is equipped throughout with Fuller 8-speed semi-automatic R-46 ROADRANGER® Transmissions. Another new group of Internationals has Fuller 5-speed 5-A-430 Transmissions.

Wheeler Transportation Company sums up its choice: "We have used Fuller Transmissions for years. The efficient and economical performance obtained guided us in selecting Fuller R-46 ROADRANGER Transmissions for our newest fleet additions. The closely spaced steps between ratios let us

keep our engines in the high horsepower range . . . make a difference in our running time. Driver acceptance is excellent, scheduled trip time is less, and fuel economy greater."

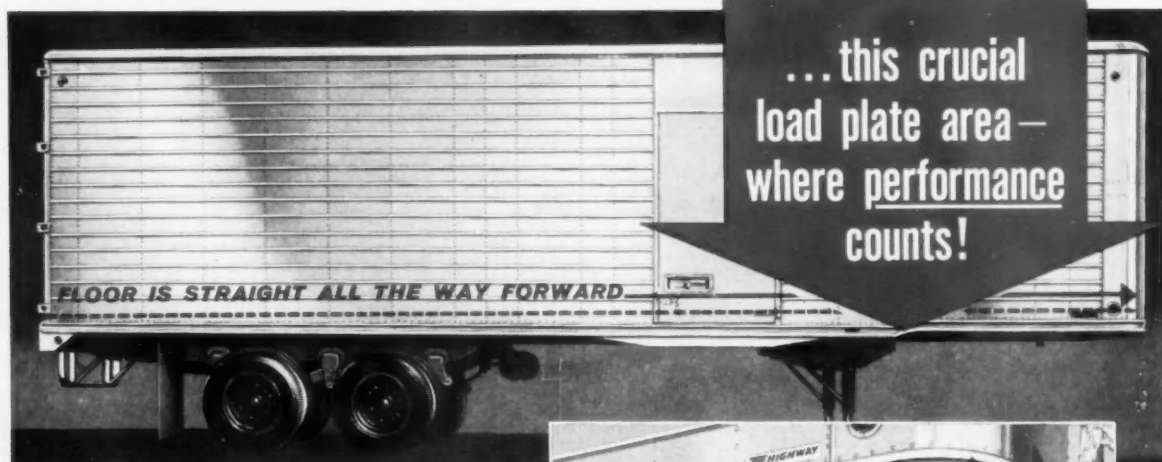
Ask your truck manufacturer or dealer now for details on the easiest shifting Fuller Transmissions available for your operation. From over 110 different models—there is a model designed with your specific job in mind.



FULLER MANUFACTURING COMPANY
TRANSMISSION DIVISION • KALAMAZOO, MICH.

Unit Drop Forge Div., Milwaukee 1, Wis. • Shuler Axle Co., Louisville, Ky. (Subsidiary) • Sales & Service, All Products, West. Dist. Branch, Oakland 6, Cal. and Southwest Dist. Office, Tulsa 3, Okla.

Here's what no other trailer manufacturer dares to show you!



...this crucial
load plate area—
where performance
counts!

Not restricted to single axle tractor operation!

No stress problems due to load or tractor change. Tandem-tandem or single axle operation... the Highway "Level-Flor" carries full-capacity loads every time it hits the road! Highway engineering adds strength, doesn't take it out!

THE HIGHWAY "LEVEL-FLOR" HIGH-CUBE ECONOVAN • CLIPPER • FREIGHTMASTER

Here's the trailer Highway held back until we could present the *only* high-cube unit built without compromise. No tractor interchange problems—tandem-tandem or single axle operation. Strength has been added—not taken out. Again Highway offers that profit-making extra performance you have come to expect and get.

For complete information write for the new Highway "Level-Flor" brochure.



Unique welded box beam and I-Beam construction maintains full strength forward and assures long, trouble-free service life. Best strength-to-weight ratio on the market.

High-tensile steel members throughout load plate area means dependable service, load-to-load and tractor-to-tractor, without schedule delay.

Full, four-inch box member guarantees work-horse duty year after year — assures extra cube payload profits no matter what your local operating needs!

Added strength at this crucial point makes this the *only* high-cube, straight floor trailer with no tractor interchange problems! Built to fill the actual operating needs of today's transport industry!

With Highway Trailers... the most important
feature is **PERFORMANCE!**



A Division of Harrin-Chapman
& Scott Corp.



HIGHWAY TRAILER COMPANY

HEADQUARTERS: EDGERTON, WISCONSIN

Manufacturers of: Commercial Trailers • Trailerized Tanks and Dry-Bulk Haulers • Public Utility Bodies •
Earth-Boring Machines • Pole and Cable Reel Trailers • Winches • Power Take-offs • Service Accessories
SALES AND SERVICE IN PRINCIPAL CITIES



Call your National Oil Seal jobber

Get his free custom service that helps reduce down time



It's simple. Your jobber checks your equipment, and puts into your shop a select stock of oil seals your mechanics use regularly. He maintains the stock and modifies it as your equipment changes.

You always have seals when needed, don't add down time waiting for seals to arrive. You get perfect replacement since Nationals are original equipment.

No more in cost. But a real savings in down time! Ask your National jobber today to analyze your fleet's oil seal needs.

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.
Detroit 13, Michigan



Continued from Page 24

good effect in creating pressure inside the cell to detect seal or post leaks as well as cracked box partitions. Hold the stopper tightly over the vent opening and squeeze the bulb to create a moderate pressure. Do not exert pressure long enough to displace sealing compound. Exterior of the container also should be inspected for any evidence of cracks or seepage of acid through the walls.

Plymouth 6-Cyl Hard Starting

ACCORDING to Plymouth Product Information News, further investigation of hard starting conditions occasionally encountered with 6-cyl engines indicates that repositioning the ignition coil in a vertical upright position allows complete insulation for the primary and secondary windings within the coil. To properly position, the lip of the angular flange must be cut off. This position allows the coil to fit flush against the vertical face of the bracket. Repositioning the coil in this manner necessitates a longer high tension wire

from the coil high tension terminal to the distributor cap. Drill two 1/4-in. elongated holes, for mounting.

Sun Visor Repair

SUN VISORS that drop down under road vibration are aggravating. Some visors are designed with a tensioning screw to snug slip action around the main support shaft. Other types without tensioning device can be repaired by removing the outer covering of the sun visor and kinking the supporting shaft so as to apply friction. Or apply a thin coat of weather strip cement or paint to the shaft and let dry overnight.

Welding Ventilation

WELDING OR cutting on galvanized metal or on steel that has been heavily coated with lead paint requires greater attention to safety than ordinary welding and cutting jobs. Zinc fumes from galvanized metal can cause illness. Lead fumes from lead paint or from special steels containing lead present the same hazard. If you have a small job of welding or cutting on galvanized metal, do the work out of doors. If you have to do a sizeable amount of welding or cutting on galvanized metal or any welding or cutting on metal that contains lead or has been painted with lead paint, provide yourself with an air-line respirator.

More Value for Your Dollar

WITH A BOYERTOWN HIGH-STRENGTH STEEL BODY

Boyertown gives you a choice of 17 standard Merchandiser* and flat face cowl bodies—all with the industry's most advanced features.

The highest traditions of Pennsylvania Dutch craftsmanship assure you of long body life, few repairs. Special construction and outfitting for your business gives you a custom body at a production line price. Put more pay in your payloads with a Boyertown.

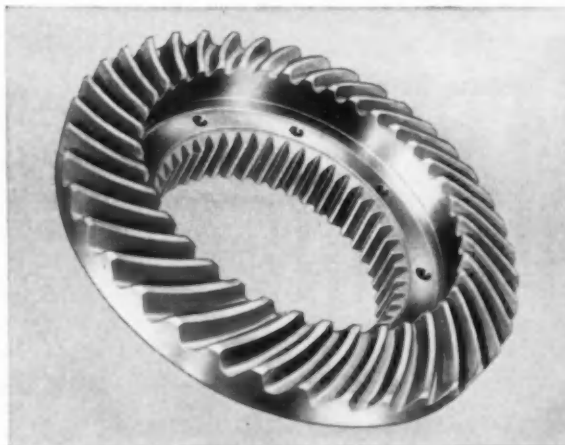
*Reg. T.M.



BOYERTOWN
AUTO BODY WORKS, Inc.
BOYERTOWN, PENNA.

For complete information, call Boyertown 7-2146, visit or write

They May Look Alike . . . but they're Not!



Replacement Ring-Gear
Made by Eaton—Axle Division



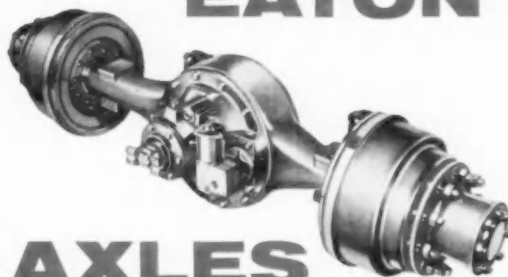
Replacement Ring-Gear
Not Made by Eaton

Only Genuine Eaton Axle Service Parts are Identical to the Original Production Components

Even Eaton Axle parts may wear out and require replacement. When this happens it is important that repairs be made with Genuine Eaton Axle Service Parts. They are identical to the original production components in design, metallurgy, heat treatment, and quality of finish—made to run together with the other axle parts. Eaton replacement parts are held to the rigid quality standards established for axle components and will deliver the same dependable, low-cost kind of service. So when, after thousands of miles of trouble-free operation, it may become necessary to replace worn parts in an Eaton Axle, it's most economical to make these replacements with Genuine Eaton Axle Service Parts.

MORE THAN TWO MILLION

EATON



AXLES

IN TRUCKS TODAY

EATON

AXLE DIVISION
MANUFACTURING COMPANY
CLEVELAND, OHIO



PRODUCTS: Engine Valves * Tappets * Hydraulic Valve Lifters * Valve Seat Inserts * Jet Engine Parts * Hydraulic Pumps
Motor Truck Axles * Permanent Mold Gray Iron Castings * Forgings * Heater-Defroster Units * Automotive Air Conditioners
Fastening Devices * Cold Drawn Steel * Stampings * Gears * Leaf and Coil Springs * Dynamatic Drives, Brakes, Dynamometers

"We've found them tops in quality, workmanship and performance in both light and extreme heavy duty use."



ANDREW KRIZANICH
Wetterau Grocer Co., Inc.
St. Louis, Mo.
Shop Superintendent

That's why the Wetterau Grocer Co., Inc. fleet of trucks uses

McQUAY-NORRIS BEARINGS



TWELVE YEARS OF EXPERIENCE HAVE CONVINCED ANDREW KRIZANICH:

"I find that with the fast life we live today we can't seem to find time to be good neighbors."

"We use a manufacturer's product and if it is good we don't say a word about it, but on the other hand if it is bad we sure take time out to let some one know about it. I for one would like to change this pattern somewhat."

"I have been using McQuay-Norris rod and main bearings in our blue diamond and red diamond International trucks here at Wetterau Grocer Company for the past twelve years and have found them tops in quality, workmanship

and performance in both light and extreme heavy duty use."

"We service approximately 40 power units in our St. Louis shop, and we never hesitate to use McQuay-Norris bearings on our overhauls as we know we are installing the best quality that money can buy. We also find that by using McQuay-Norris bearings we have the added insurance of having the best engineering knowledge as close as our telephone, or as close as our jobber salesman."

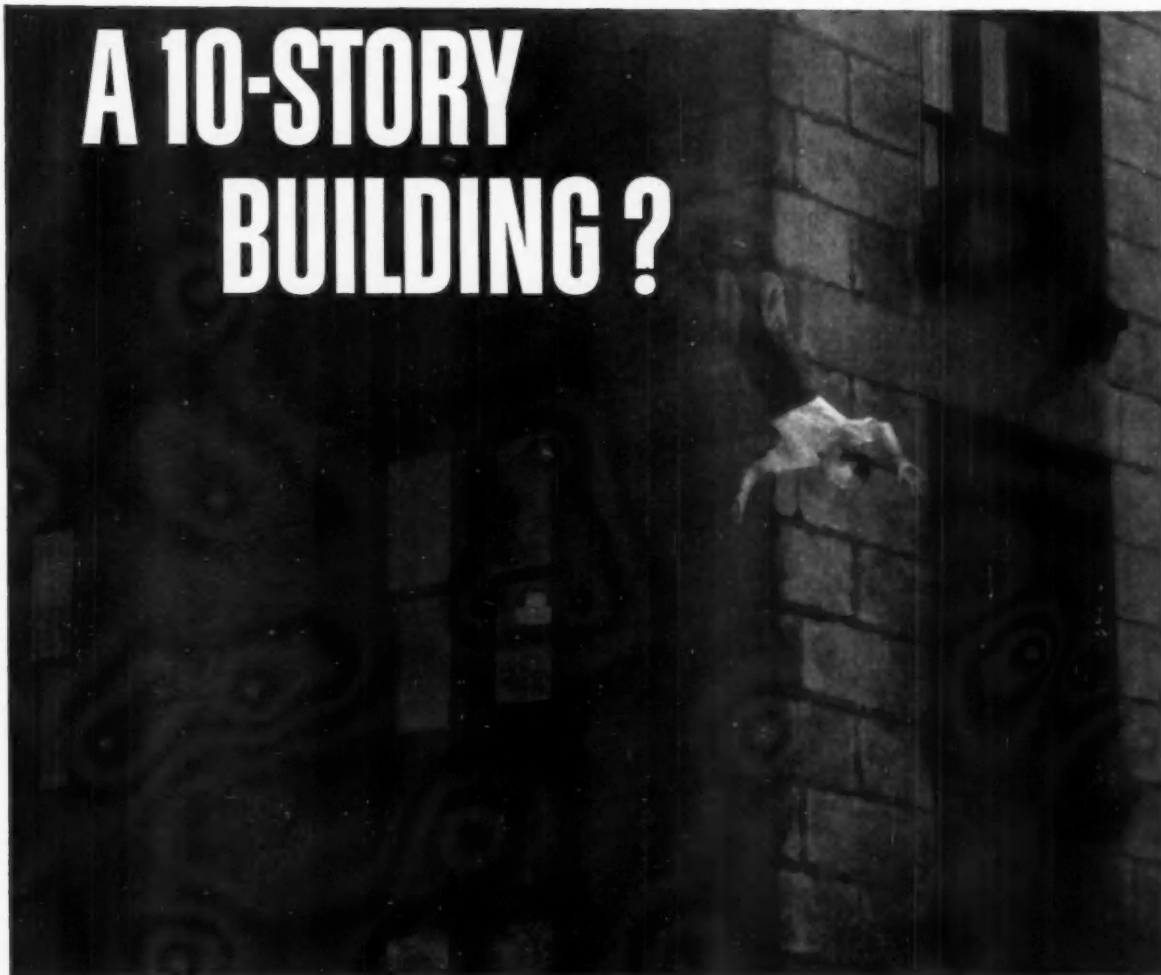
"I would not hesitate to recommend this product to anyone in the automotive business."

McQUAY-NORRIS

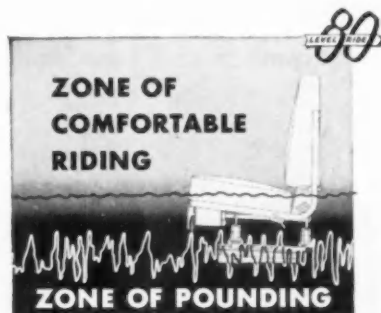
Manufacturing Company St. Louis • Toronto

APPROVED ORIGINAL EQUIPMENT FOR CARS, TRUCKS, BUSES AND TRACTORS

EVER JUMP OFF A 10-STORY BUILDING?



Your Drivers Do It Every Day



With a Bostrom "Level-Ride" 80 Seat road shock and vibration are absorbed between the seats and the floor of the cab. You float smoothly over bumps and jolts.

During an average working day truck drivers riding on conventional seats absorb shock and vibration equal to the impact of a fall from a 10-story building!

This kidney-busting, spine-pounding shock means tired, inefficient drivers whose life spans are shortened and who are so "beat up" after a few years that their ability to drive a truck is impaired.

A Bostrom "Level-Ride" 80 Suspension Seat changes all that. Shock and vibration are absorbed between the bottom of the seat and the floor of the cab . . . the driver and seat float over bumps and jolts in a

straight line without back slap or back rub.

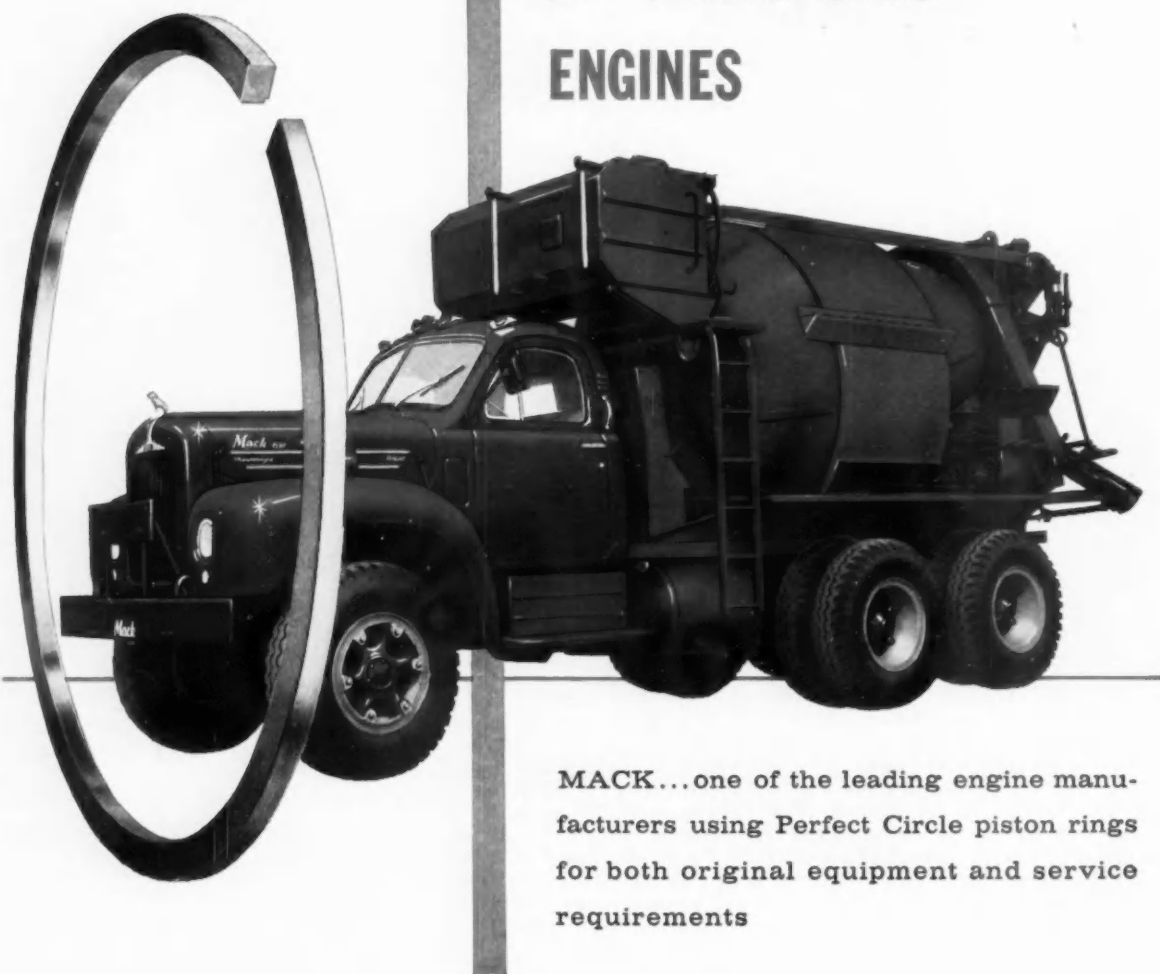
Used today by leading truck fleets . . . factory installed as optional equipment by all truck manufacturers. Available for replacement on your existing trucks from your truck dealer or parts jobber. See your Bostrom Distributor. Bostrom Manufacturing Company 133 West Oregon Street, Milwaukee 4, Wis.

BOSTROM

FREE MOTION PICTURE IN SOUND AND COLOR "Gentlemen, Be Seated," an informative motion picture on modern highway travel, is available without charge for showing to groups. Write for booking date.

For
Best Performance in

Mack
ENGINES



MACK...one of the leading engine manufacturers using Perfect Circle piston rings for both original equipment and service requirements

PERFECT CIRCLE
CHROME PISTON RINGS



UP FRONT WITH CCJ

OCTOBER 1957 FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

MR. EXECUTIVE, State mileage taxes may prove to be unfair and invalid, says Jess N. Rosenberg, Western Highway Institute general counsel. Speaking at the Idaho Motor Transportation Assn. convention late last month, Rosenberg pointed out that the U. S. Supreme Court has said state taxes for the privilege of using roads may be held invalid if in excess of fair compensation for that privilege. He builds the rest of his case this way: Congress in 1959 will tackle the big question—"Who pays how much for what highway?" The answer may provide a measure of what is "fair compensation" for use of roads by interstate trucks and buses. If the state mileage tax bite exceeds this "fair compensation," Rosenberg's argument is that the tax is illegal.

EXHAUST GAS will get Congressional attention come January. A bill is pending which bans use of vehicles discharging "undue" amounts of exhaust. It authorizes Surgeon General to set limit on maximum amount of unburned hydrocarbons tolerable to public health. Problem is to set an **enforceable** standard. One solution in use at the present time is a full color pocket guide carried by Detroit police in enforcing that city's ordinance banning excessive exhaust. It was developed by Automobile Manufacturers Assn., has been included in this issue through special arrangement (see page 84).

THIRD SAFETY check so far this year by the Interstate Commerce Commission produced no significant improvement over the two earlier ones. Out of the 12,018 vehicles receiving a thorough inspection late in August, 88.4 per cent had one or more defects or deficiencies (as compared with 89.9 per cent in May and 88.2 in July). Of the vehicles checked, 44.6 per cent were deficient in respect to drivers' logs, 28.1 per cent in respect to doctors' certificates. Close behind was trailer brake tubing and hose. Defects in this group were found in 22.6 per cent of the vehicles checked. "Out-of-Service" stickers went on 20.2 per cent—almost double the 10.3 per cent of the May check. The ICC also used another means of Safety Reg enforcement late in August. At that time. . .

SHOW CAUSE orders were issued against six Class I motor carriers—Ace Lines (Minneapolis, Minn.), Eagle Motor Lines (Birmingham, Ala.), Penn-Dixie Lines (York, Pa.), Safeway Truck Lines (Chicago), Transamerican Freight Lines (Detroit), Watkins Motor Lines (Thomasville, Ga.). Citing them for excessive violations of the Safety Regs, the Commission ordered them to show cause why their rights should not be suspended. . . and remain suspended until their vehicles "have been placed in safe operating order" and procedures established so they remain in safe operating condition in the future. Hearings on the "Show Cause" orders began Sept. 30 in Minneapolis and Washington, D. C., end on Oct. 14 with a hearing in Chicago.

DETROIT DISPATCH

DYNAMOMETER TESTS WILL soon be able to duplicate the actual road conditions the truck will find when put into service. Perfect Circle Corp. has come up with a tape recorder that records engine rpm, manifold pressure, oil and water temperature as vehicle is being road tested. Once these variations over the route are recorded, the tape can then be fed into the dynamometer to control load and throttle, thus reproduce road conditions as other vehicles are checked.

FLAT HEAD ENGINES WITH the combustion chamber entirely in the cylinder are appearing. Included in Chevrolet's 1958 line (page 88, this issue) is a new 348-cu in. V-8 model. One side of cylinder is higher than the other, uses a "peaked-roof" piston to form combustion chamber. One of the engines offered with Ford's new Edsel is a 410-cu in. V-8 with a similar design.

FORD HAS NOT said that it will use this design in its truck engines. However, it has announced three new en-

gines for its 30,000 lb GVW and up trucks. Reported to have displacements of 401, 477 and 534 cu in., they will not be available until after the first of the year.

FREE PISTON ENGINE BEING developed by Baldwin - Lima - Hamilton has two-stage compression, utilizes outward stroke of piston for added energy. It produces 125 shaft hp without turbocharging, 250 shaft hp with. Maker says it shows promise for use on construction equipment and other off-highway vehicles.

FLEET SALES OF passenger cars show about 55 per cent have automatic transmission. Some rental companies buy as many as 75 per cent of their cars with the units.

BRAKE STUDIES BY Interstate Commerce Committee and Bureau of Public Roads are progressing on schedule with exception of laboratory work. This was delayed by absence of needed electronic gear. Because of

WASHINGTON WATCH

SEAT BELT REPORT FROM Congressional safety subcommittee was released last month. It includes some new facts developed by Cornell University experts that fairly well prove the value of their use (page 80, this issue).

AMERICAN TRUCKING ASSNS. annual convention opened Oct. 6 in Chicago. Two big subjects getting lots of debate are (1) "pseudo" private truck operation and "exempt" commodity transport, and (2) state reciprocity agreements and laws.

HOUSEHOLD GOODS CARRIERS HAVE until Nov. 1 to comply with the Interstate Commerce Commission's new rules governing transport of household furnishings. This is the second postponement for these regs (July, page 34).

WHITE MOTOR CO. WILL emphasize the importance of truck transportation

over the NBC TV show "Today" during the coming year. As its current ATA Foundation project, White opened the series early this month with a behind-the-scenes telecast at the National Truck Roadeo and an on-the-spot interview with new ATA President Guy Rutland, Jr., at the national convention.

NATIONAL AUTOMOBILE TRANSPORTERS ASSN. has appointed William A. Bresnahan as its general manager, will move its headquarters from Detroit to Washington. Bresnahan resigned his position as ATA assistant general manager to take the new job.

CONTRACT CARRIERS ARE being asked by the ICC to fill out a questionnaire. Purpose is to help the Commission decide whether or not individual carriers will get permits as contract carriers under the new definition passed by Congress this year (page 90, this issue), or certificates as common carriers.

this, it is possible that the advisory committee meeting scheduled for next month (Aug., page 33) will be postponed until lab work gets caught up.

MAINTENANCE LAGS far behind truck design, says International Harvester's Clyde Leslie. Speaking at the annual meeting of National Truck Leasing System in Chicago last month, he criticized service shops for (1) lack of proper tools, (2) failure to use service manuals for work on new components such as automatic transmissions, (3) general indifference to use of pressure gages and instruments.

IMPACT TOOLS ARE under study by experts. Chrysler's Training Center is making extensive studies to see what effect these tools may have on present, established time rates. Ford also is taking a close look at the trend. One manufacturer service department official predicts that, within three years, flat rate time will be based completely on impact wrenches, at least for removing nuts and bolts.

NO NEW THIRD structure taxes were enacted by state legislatures this year, reports Private Truck Council of America. However, it warns members that does not mean they can relax their vigilance.

RECENT HIGHWAY USE TAX rulings by Internal Revenue Service include . . . (1) diesel fuel used in separate engine to power air conditioning in buses is not subject to 3¢ per gal federal tax. . . (2) bus air conditioning equipment weight need not be included in determining actual unloaded weight of vehicle for federal weight tax purposes. IRS tells National Assn. of Motorbus Operators, "We are of the opinion that the actual unloaded weight of a bus fully equipped for service for use tax purposes should not include the weight of any equipment attached to or mounted thereon which is not a part of the body and performs no function in the movement or maintenance of the vehicle."

TRUCK TONNAGE

SECOND QUARTER volume of intercity freight transported by truck in 1957 was 1.7 per cent less than the volume hauled during the second quarter, 1956, reports American Trucking Assns. Research Dept. The report, based on data covering 2132 Class 1 and 2 intercity common and contract carriers, does not indicate if this is an absolute drop in tonnage or the result of growth of private and "exempt" truck operation. Middle Atlantic and Central regions (reporting half of total tonnage hauled) showed second quarter losses of 0.6 and 9.2 per cent respectively as compared to second quarter, 1956. Biggest gains were in the Southern (up 7.3 per cent), Northwestern (up 4.9) and Rocky Mountain (up 3.7) regions. (For details, see page 226, this issue.)

Month	% Change from Previous Month	% Change from a Year Ago
2nd Quarter '57	.....	- 1.7
June, 1957	- 6.6	- 3.9
May, 1957	+ 2.7	0.0
April, 1957	.....	+ 3.1
1st Quarter '57	.....	+ 0.7
March, 1957	+ 7.5	- 1.8
February, 1957	- 7.0	- 2.4
January, 1957	+14.4	+ 3.7
4th Quarter '56	.....	- 0.2
December, 1956	-12.2	- 5.6
November, 1956	-10.2	- 1.4
October, 1956	+15.7	+ 7.9
3rd Quarter '56	.....	+ 0.4
September, 1956	- 6.5	- 6.6
August, 1956	+12.7	+ 1.3
July, 1956	.....	+11.2

TRUCK AND BUS PRODUCTION

Make	For Weeks Ending			Year to Date	
	Sept. 14	Sept. 7	Aug. 31	1957	1956
Chevrolet	4,447	5,802	6,907	256,229	264,107
G. M. C.	1,074	1,156	1,319	48,515	68,113
Diamond T	138	85	142	3,895	3,673
Divco	60	46	60	2,211	2,737
Dodge and Fargo	233	1,464	1,568	57,312	63,160
Ford	6,282	5,465	6,217	282,953	218,091
International	2,485	2,024	2,492	87,054	99,162
Mack	354	279	396	12,471	13,143
Reo	135	107	108	3,348	2,764
Studebaker	140	15	0	7,321	11,402
White	264	215	241	10,613	12,914
Willlys	1,047	843	1,318	43,946	42,346
Other Trucks	95	85	96	3,920	6,131
Total - Trucks	16,754	17,308	20,882	789,788	806,763
Buses	50	45	60	3,002	3,215
Total - Trucks and Buses	16,804	17,433	20,942	792,790	809,978

Source: Automobile Manufacturers Assn.

IN THIS ISSUE

. . . the emphasis is on **BODIES**, with a review of **WHAT'S AVAILABLE** to fleetmen. . . . page 66
description of **FLEET-BUILT DETACHABLE** vans. . . . page 70
step-by-step **REPAIR** story using epoxy resin. . . . page 72
report on **APPEARANCE** that aids sales. . . . page 74
digest on up-dating **CLEANING** and **PAINTING**. . . . page 75

. . . two articles show how **EXHAUST GAS** can be used as an **ENGINE TROUBLESHOOTING** aid. . . . page 82
or to enforce **ANTI-EXCESS EXHAUST** laws. . . . page 84
. . . this one includes full-color **SMOKE** illustrations

The Road Ahead



SAFETY MEN, BOTH bus and truck, are heading for Chicago later this month (Oct. 21-25) to attend the National Safety Congress. Transit sessions lead-off with a discussion on the public relations value of safety. Interesting feature is a debate on the need for more—or less—accident records and statistics. Commercial vehicle sessions will have an emphasis on driver selection. Three medical experts are slated to list the physical, visual and emotional factors in picking a driver. The panel's views will then be challenged by three fleet safety experts.

SAFETY MEN ALSO are interested in American Standards Assn. latest project . . . developing a uniform, nationally recognized method for measuring commercial motor vehicle traffic accidents. Idea was proposed by National Safety Council's Commercial Vehicle Section. To be worked on are standard definitions for "vehicle," "exposure" and "accident" to be used in developing methods of recording and measuring fleet accident experience. ASA invites all interested groups to participate. Its address is 70 East 45th St., New York City, N. Y.

MAINTENANCE MEN FROM light vehicle fleets will be interested in Society of Automotive Engineers' National Transportation Meeting. Scheduled for early next month (Nov. 4-6) at the Statler Hotel, Cleveland, Ohio, it features a panel discussion on "Problems of Design and Maintenance of Light Vehicles." Truck rental, multi-stop, pick-up and delivery, service and passenger car fleets will be represented on the panel.

HOUSEHOLD GOODS CARRIERS AWAIT the moving industry's "Bureau of Standards." Steps to put the plan into final form were approved at the recent meeting of ATA's Movers Conference of America. The proposed "Bureau" would have the task of developing basic principles of service to the public and fair competition between carriers for the moving industry. It will also handle shipper and carrier complaints that can't be settled by routine methods. Biggest task will be to set-up and administer a "Seal of Approval" program for household goods carriers.

TOTAL TRUCK AND BUS registrations for 1957 will reach 11,103,000 vehicles, estimates the Bureau of Public Roads. This includes both public and privately-owned vehicles except those owned by the military services. If the BPR is right, it's a new record . . . and 2 per cent higher than the 1956 record of 10,880,215. Total registration of all vehicles—passenger cars plus trucks and buses—is expected to reach 67,204,000 . . . 3.1 per cent higher than 1956. Here's the 7-month record for 1957:

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires					
									Replacement Shipments		Original Equip. Shipments		Inventory End of July	
	July	7 Months	July	7 Months	July	7 Months	July	7 Months	July	7 Months				
1957	79.1	501.9	76.9	541.5	4.3	36.2	302	2151	819.3	4902.6	348.7	2532.9	3219.1	
1956	78.4	533.4	63.0	551.0	5.0	42.1	220	2276	837.3	5205.2	361.7	2991.5	3305.8	



EAST and SOUTH

MIDWEST

WEST

**FAMOUS TRUCK FLEETS
REORDER CUMMINS**

CUMMINS DIESELS POWER MORE NEW TRUCKS THAN ALL OTHER DIESELS COMBINED



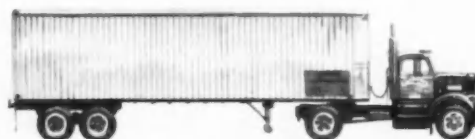
***DENVER-CHICAGO TRUCKING COMPANY, INC.,** Denver, Colorado. The Nation's only coast-to-coast carrier. Its fleet includes more than 190 Cummins-powered units. Denver-Chicago's network covers 7,410 miles and serves over 20,000 towns, cities and villages.



***PACIFIC INTERMOUNTAIN EXPRESS,** Oakland, Calif. One of the largest Cummins users in the country, operating in the western two-thirds of the U.S. Famous in the industry for developing innovations that have become standard for truck operators everywhere.



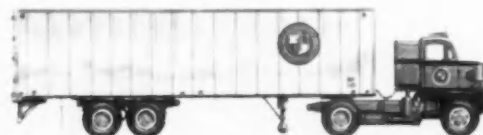
***REFINERS TRANSPORT & TERMINAL CORPORATION,** Detroit, Michigan. This major petroleum and chemical hauler extends its operations through the Midwestern and Eastern states. Now operating over 65 Cummins-powered rigs.



***ROADWAY EXPRESS, INC.,** Akron, Ohio. Famed "hot relay" service cuts 24 hours from delivery time between North and South terminals. Operates 165 Cummins JT's in Whites and 50 Cummins JT's in Internationals.



***JOHN SCHUTT, JR., INC.,** Buffalo, New York. Veteran Buffalo trucker specializing in the hauling of cement and heavy industrial equipment. Cummins JT and NH engines furnish the bulk of their automotive power.



***JOHNSON MOTOR LINES, INC.,** Charlotte, N.C. One of the leading commodity haulers in the state, their rigs average over 150,000 miles of service a year. Part of their fleet consists of 111 JT-powered International "sleepers" and 24 JT-powered "space-savers."

Repeat purchases of Cummins JT, HR, HRF and NH diesels are being made by more and more famous truck fleets!

More gasoline truck operators are buying Cummins for the first time, too! New and repeat purchasers have learned that Cummins gives more miles per gallon, low fuel and maintenance costs and greater dependability. That's why, for 5 straight years, registrations have shown Cummins Diesels powered more new trucks than all other makes of Diesels combined!



***REFRIGERATED TRANSPORT CO., INC.,** Atlanta, Ga. Fast service for perishables, handled by over ninety NH Cummins Diesels. Their rigs average 130,000 to 150,000 miles of dependable service each year.



***SUPER SERVICE MOTOR FREIGHT COMPANY, INC.,** Nashville, Tenn. Keeps over 196 NH-powered Whites busy on a fast freight schedule between the South and the East. Specially designed tractor-engine combination permits extra payload space.



***GREAT SOUTHERN TRUCKING CO.,** Jacksonville, Fla. Common carrier with one of the largest fleets in the country. Member of the Ryder System, with mainline hauls between Jacksonville and Miami. Operates both JT and NH Cummins Diesels.



***YELLOW TRANSIT FREIGHT LINES,** Kansas City, Missouri. Recently completed the switch from gasoline to Cummins Diesels. 302 JT-powered units are operating over a network of 8,436 miles, extending from the Great Lakes to the Gulf of Mexico.



***SMITH TRANSPORT LIMITED,** Toronto, Ontario. Recently put a new fleet of 90 JT-powered Whites into service. These units battle the rough, unpredictable climate of Northern Ontario and Manitoba on routes extending from Toronto, Ontario to Winnipeg, Manitoba.



***DAN DUGAN OIL TRANSPORT COMPANY,** Sioux Falls, S.D. Operates more than 80 Cummins-powered units over a 5-state area. These units average in excess of 135,000 miles each year. Fuel mileage averages almost 6 miles per gallon.

*Indicates repeat purchasers of Cummins power

CUMMINS DIESEL NEWS

Cummins Engine Company, Inc.
Columbus, Indiana

Today, more than ever, truckers are going to more powerful trucks to move more freight faster. Common and contract carriers and a greater number of private fleets are looking to the heavy-duty trucks to earn more profits.

Heavy-duty trucks constitute 13% of total present truck production compared to 5% ten years ago. Now, 20% of total intercity freight goes by truck, and within the next ten years the industry expects a 50% expansion.

Consistent with this trend is the growing use of diesel power. Less than ten years ago, one truck in ten was powered by a diesel. The present ratio is one to five—and growing.

Across America, truckers have been specifying Cummins Diesels over all other makes of diesels. Cummins now powers more new trucks than all other diesels combined! Why this tremendous acceptance?

- Cummins power is easy to obtain. 17 truck manufacturers offer Cummins Diesels in more than 225 models.
- Cummins service is easy to get. Over 300 points throughout the United States and Canada furnish parts and service.
- Cummins Diesels are economical. You get long engine life and low maintenance and fuel costs.
- Cummins engines are available from 125 to 335 horsepower—for every highway application.

No wonder, then, Yellow Transit Freight Lines of Kansas City, Missouri, made a repeat purchase of 80 JT-6 **TURBODIESEL** Engines. Says Yellow Transit's president, George E. Powell, Jr., "In my opinion, the Cummins JT engine is one of the finest engines available today for the size road equipment we operate. Although we were unfamiliar with diesel power, at first, a thorough cost study revealed the economies possible with diesel on our road operation. The Cummins JT has done the job, at the costs anticipated." The new JT's bring Yellow Transit's fleet up to 302 Cummins units—222 JT's being in service since 1955.

Here are more examples of repeat Cummins JT-6 TURBODIESEL Engine purchasers:

- | | |
|--|---|
| • Boss-Linco Lines, Buffalo, N.Y. | • Kimbel Freight Lines, St. Louis, Mo. |
| • Byers Transportation Co., Kansas City, Mo. | • Richardson Truck Lines, St. Louis, Mo. |
| • Central Truck Lines, Tampa, Fla. | • Roads Resurfacing Co., Ltd., Chesterville, Ont. |
| • Dan Dugan Oil Transport Co., Sioux Falls, S.D. | • Smith Transport Limited, Toronto, Ont. |
| • ET&WNC Transportation Co., Johnson City, Tennessee | • Tank Truck Rentals, Norristown, Pa. |
| • Jones Truck Lines, Springsdale, Ark. | • Union Freightways, Omaha, Nebr. |

As these truck lines have chosen the JT, other famous fleets with greater load requirements have purchased and repurchased higher horsepower Cummins HR and NH series engines.

Common and contract carriers and private haulers, too, agree Cummins is the top diesel. They know Cummins offers the most economical, most dependable power, as proved in their own application.

Your local Cummins distributor or truck dealer can help you select the proper Cummins Diesel for your trucking operation.

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won
resis
oils,
A q
cem
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to be
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COMM



*The
hard working
seal is
made with*

Permatex Sealants

*Put the
FORM-A-GASKETS
to work for you*

STICK-N-SEAL

outstanding tackiness —
won't wash out—
resists gasoline, lubricating
oils, water, glycol and kerosene.
A quick-setting brushable liquid
cement made of Buna-N type synthetic
rubber. Holds gaskets and other material
to be assembled in place and does away with
"delayed reaction" leaks after the job is done.

GASKET CEMENT

for permanent assemblies where no
adjustments or disassemblies are necessary.
An extra-heavy adhesive that dries hard—resists
gasoline and oil.

No. 1—quick drying, hard
setting paste for sealing
irregular surfaces and permanent
assemblies that must withstand
high pressure and heat.

No. 2—slow drying, pliable
paste for general assembly
work where disassembly
is periodically necessary.

No. 3—a brushable liquid that
remains pliable for easy
disassembly. Ideal for reaching
hard-to-get-at areas like
bolt threads, carburetors
and water pumps.

Super "300"—stands up under
new synthetic and detergent
lubricants. A brushable liquid
for use in high compression
engines and transmissions.

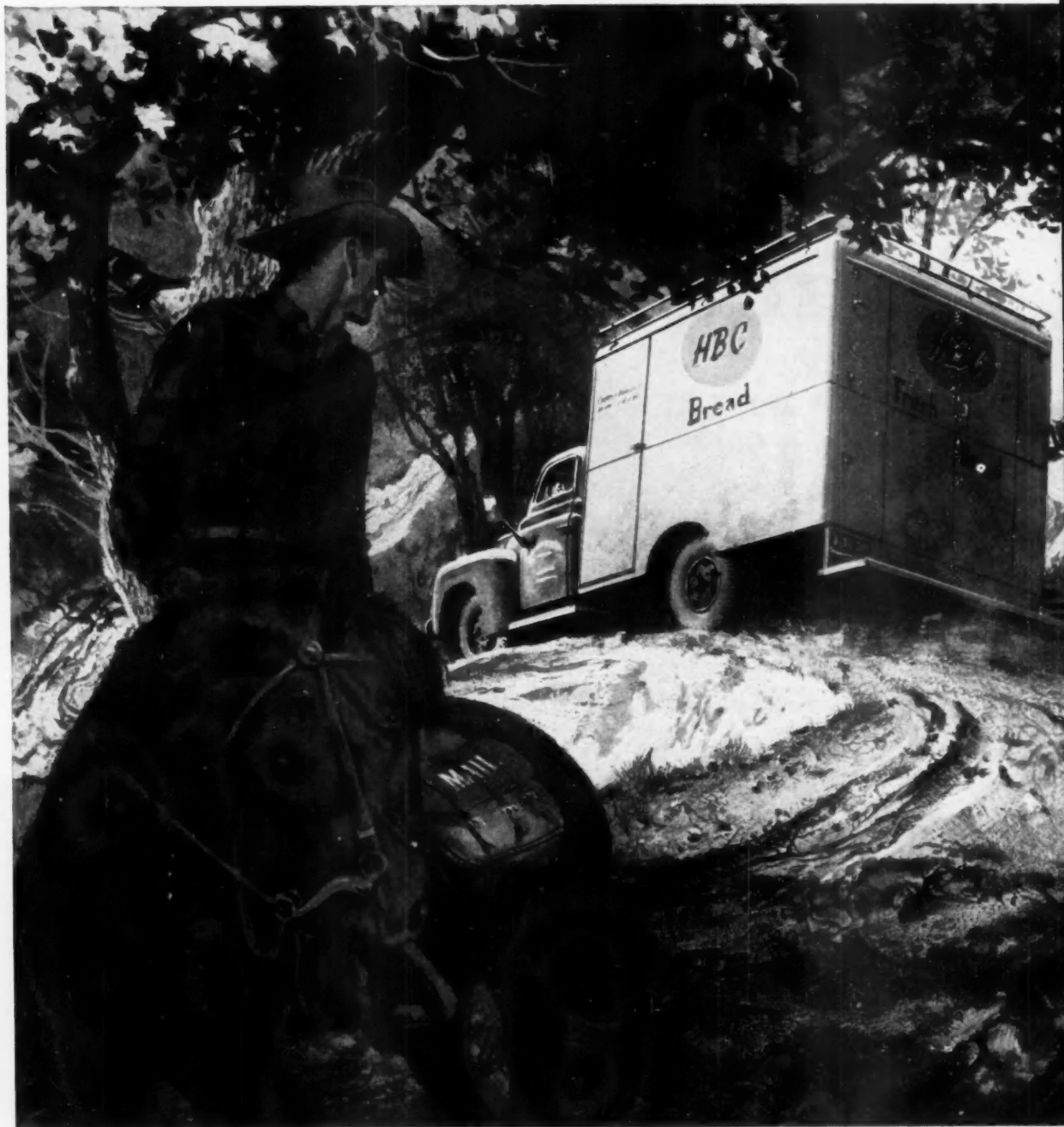


Permatex Company, Inc.

General Offices: 300 Broadway, Huntington Station, New York
Factories: Brooklyn 35, N. Y., Kansas City 15, Kansas

**You'll make Higher Profits for Higher Quality Work
with the Complete Permatex Line of Automotive Sealants
Order from your jobber today!—**

"We made it where the m



Buy and Specify

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY

mail went horseback— and never lost a tire or a customer!"

**How triple-tempered
TRIPLE-TOUGH 3-T NYLON CORD
kept Harris Baking Co. rolling
during road work that drove
traffic cross-country.**

"The road builders helped us wherever humanly possible—but on our mountainous Ozark routes, most of the detours were *INhuman* problems.

"Our bread trucks took to stream beds, fields and canyon-like bypasses," continues Harris Superintendent Coleman Currier. "Some stretches so bad, the mail went horseback! So bad that even a broken-down section of flint or gravel road looked like a boulevard!

"But we had to keep rolling—on time. Each truck delivers 160 tons of bread annually, with 80 consumer calls daily. If we miss rush hours, we can choke on unsold bread.

"We broke wheels, rims, axles—tore out rear ends—but never lost a Triple-Tough 3-T Nylon Cord tire! Goodyear's process for triple-tempering tire cord is really something. Those tires took fantastic beatings—yet kept us rolling when competitors couldn't get through.

"We knew we could depend on 3-T Nylon. Been using it since Goodyear brought it out—and now our whole fleet is on it!

"In our particular operation," continues Mr. Currier, "3-T Nylon delivers 4 TIMES OUR FORMER ORIGINAL MILEAGE. And where former tires seldom took even ONE recap, we now get 4 or 5! We leave recapping to our Goodyear dealer. He checks regularly—and recaps when most economical.

"It's done wonders for our profits. Tire-cost-per-mile is lowest in our history—and practically NO tire down time! That sure helps on routes where servicing one down-truck can kill half a day.

"Few operations are tough as ours—but I'd tell any trucker: 'If you're not on Goodyear Triple-Tough 3-T Nylon Cord, you're operating at needlessly high cost!'"

Harris Baking Co., Rogers, Arkansas, operates 16 routes covering 18 northwest Arkansas counties and 3 in southwest Missouri—clocking a million back-road miles yearly. For still other significant case histories, see your Goodyear dealer or contact Goodyear, Truck Tire Dept., Akron 16, Ohio.

LICKS THE 3 GREAT TIRE-KILLERS!



Unless a tire's cord body withstands the HEAT of tough runs—the SHOCK of murderous bumps—the FATIGUE of long, hard service—all the rubber in the world can't save it! TRIPLE-TOUGH 3-T Cord is triple-tempered by Goodyear's exclusive "Tension, Temperature and Time" process expressly to lick those 3 great tire-killers—and so deliver more miles, more recaps.



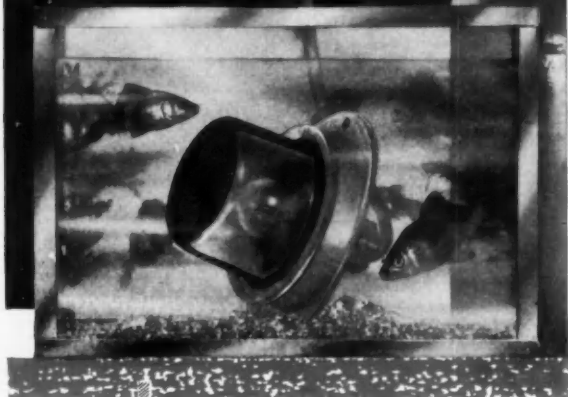
Look for this nearby Goodyear dealer sign for better tire values—better tire care.

Tubeless or Tube-Type

OTHER KIND

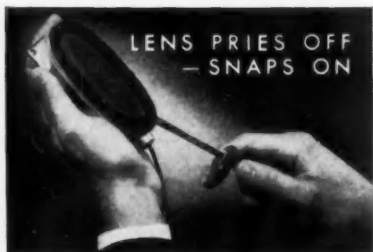
WARREN Snap Seal LAMPS

*"Bubble
tight"*
UNDER PRESSURE



LENS HOUSING
PROVEN "O" RING LENS SEAL

Warren Snap Seals prove that after six months of total immersion in water, all exterior conditions are excluded indefinitely. Results: lifetime service, minimum maintenance, no rusting or corrosion, longer bulb life, no inside lens fogging.



LENS PRIES OFF
— SNAPS ON

No time-consuming screws, clips or gaskets. Replace bulb in seconds.

Free Catalog...

to improve your safety lighting send today—

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____



BETTS MACHINE COMPANY
WARREN, PENNSYLVANIA

MANUFACTURERS OF WARREN EMERGENCY VALVES & WARREN MANIFOLD VALVES

DATES and DOINGS

OCTOBER

- 20-22—Florida Trucking Assn., Annual Convention, Eden Roc Hotel, Miami Beach, Fla.
- 21-25—National Safety Congress and Exposition, Conrad Hilton, Congress, Morrison and LaSalle Hotels (Commercial Vehicle and Transit Sessions, LaSalle Hotel), Chicago, Ill.
- 24-26—Oregon Trucking Assn., Annual Convention, Gearhart Hotel, Gearhart, Ore.
- 25-26—West Virginia Motor Truck Assn., Annual Meeting, Daniel Boone Hotel, Charleston, W. Va.
- 28-30—American Road Builders Assn., Annual National Highway Conference for County Engineers and Officials, French Lick-Sheraton Hotel, French Lick, Ind.
- 28-30—National Lubricating Grease Institute, Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

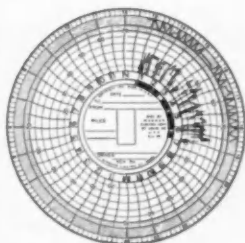
NOVEMBER

- 2—Arizona Motor Transport Assn., Annual Meeting, Hotel Westward Ho, Phoenix, Ariz.
- 4-6—Society of Automotive Engineers, Transportation Meeting, Hotel Statler, Cleveland, Ohio.
- 5-6—Society of Automotive Engineers, Diesel Engine Meeting, Hotel Statler, Cleveland, Ohio.
- 6-8—Society of Automotive Engineers, Fuels and Lubricants Meeting, Hotel Statler, Cleveland, Ohio.
- 7-9—Montana Motor Transport Assn., Annual Meeting, Hotel Rainbow, Great Falls, Mont.
- 10-12—New York State Motor Bus Assn., Fall Meeting, Hotel Syracuse, Syracuse, N. Y.
- 11-12—Texas Motor Bus Assn., Annual Meeting, Commodore Perry Hotel, Austin, Texas.
- 11-14—International Soft Drink Industry Exposition (including truck, truck body and equipment displays), National Guard Armory, Washington, D. C.
- 14—Delaware Motor Transport Assn., Annual Meeting, DuPont Hotel, Wilmington, Del.
- 14-15—Arkansas Bus & Truck Assn., Annual Meeting, Hotel Marion, Little Rock, Ark.
- 17-18—North Carolina Bus Assn., Annual Convention, Robert E. Lee Hotel, Winston-Salem, N. C.
- 17-19—Virginia Passenger Bus Assn., Annual Meeting, Thomas Jefferson Hotel, Charlottesville, Va.
- 18-21—National Defense Transportation Assn., Annual Meeting, Shoreham Hotel, Washington, D. C.
- 18-21—Air Conditioning & Refrigeration Institute Exposition, International Amphitheatre, Chicago, Ill.
- 21-22—Associated Motor Carriers of Oklahoma, Annual Meeting, Biltmore Hotel, Oklahoma City, Okla.
- 29-Dec. 8—San Francisco International Auto Show (including display of trucks and truck bodies), Cow Palace, San Francisco, Cal.

DECEMBER

- 1-2—Missouri Bus & Truck Assn., Annual Meeting, Hotel Chase, St. Louis, Mo.
- 2-6—American Transit Assn., "Traffic Improvement Week."
- 3—Nevada Motor Transport Assn., Annual Convention, Thunderbird Hotel, Las Vegas, Nev.
- 9-10—President's Committee for Traffic Safety, Washington, D. C.
- 13—New England Transit Club, Winter Meeting, Statler Hotel, Boston, Mass.

Here's how
Tachographs
can help
you!



REDUCE OPERATING COSTS

Tachographs can help you lower operating costs by verifying driver's pay (hours and miles), overtime, delays in loading or unloading, showing time and location. Tachographs help drivers control speed thus saving on gas, oil and tires. They lead the way to better driving, which reduces the number of reportable accidents and results in lower insurance rates.

PROVIDE INFORMATION IN ACCIDENT CASES

Tachographs accurately record on a wax-coated chart the exact time accident occurred and the precise speed at which your vehicle was traveling, the duration of the delay and the time travel is resumed. Tachograph charts have often been used to substantiate driver's testimony in court cases involving accidents or speeding.

REDUCE UNSCHEDULED STOPS

The wax-coated Tachograph chart permanently records when your vehicle stopped, for how long, and the total number of stops made in any 24-hour period. By comparing this information with the trip schedule, you will know exactly how many stops were made, how closely the schedule was kept and how fast the vehicle was driven.

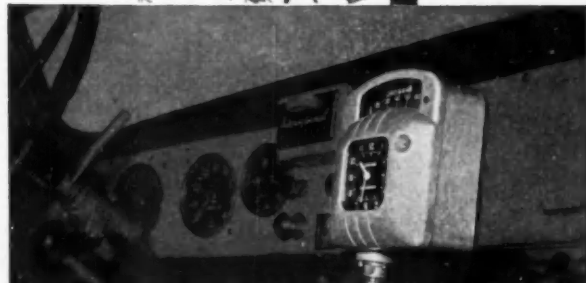
SELECT BETTER ROUTES

From your analysis of the chart, you can pin-point those areas where tie-ups are likely to occur, where slowdowns may be necessary and where traffic conditions might necessitate alternate routes. Good, too, for establishing the schedule of new runs whether normal, "express," or special.

AVAILABLE IN M.P.H. OR R.P.M. MODELS

In diesel-powered rigs, the R.P.M. Tachograph is a constant help because it shows the driver when to shift gears to reduce engine abuse from overspeeding, "lugging" and improper shifting. When installed side-by-side with a M.P.H. Tachograph unit, you get the most complete, permanent record of your vehicle's operation.

Get the full story on how it pays you to have Tachographs on your driving team. Send the coupon below for your free copy of Booklet SU-3.



Wagner Electric Corporation

6476 PLYMOUTH AVE., ST. LOUIS 14, MO.
Please send a copy of Booklet SU-3.

Name and Position _____
Company _____
Address _____
City _____ State _____
We operate _____ Vehicles
(NUMBER)

S57-2

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • CoMoX BRAKE LINING • WeRoL • AIR HORNS • AIR BRAKES • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL CRANE BRIDGE BRAKES

On the Cal-Sag channel widening project

Mary Construction



Adamec and Garms watch Lima dragline in action. Helping customers with the lubrication of equipment such as this is something for which Steve Adamec is well fitted. Steve has a mechanical engineering degree from Purdue. He has been providing technical service to Standard customers for 10 years. Steve is a graduate of the Standard Oil Company Sales Engineering School.

Project Superintendent Bill Jordan and Ray Elgas lay out schedule for servicing Page dragline. Page has 9.5 yard bucket, is powered by Page ½ vertical V6,700 h.p. diesel.

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gets the job done

...uses STANDARD Fuels and Lubricating Oils



In 565 days, Mary Construction will widen 3.5 miles of the Cal-Sag ship channel. The channel will be widened to 225 feet from its present 60 foot width. To do this, Mary Construction will move 2.8 million yards of dirt and rock. Big job. Big need for service on gasoline, diesel fuel, lubrication oils. Mary Construction buys from the Standard Oil Company.

This is why Irvin Garms, general superintendent, and Bill Jordan, project superintendent, decided on Standard Oil products. First, they knew they would get products of top quality . . . products that meet or surpass the equipment manufacturer's recommendations. Just as important, they knew they would get service. Standard's bulk plant is only four miles from the project. Deliveries are made twice daily. In the early stages of the project, additional deliveries were made at midnight and at 8:00 a.m. Additional emergency trips were frequent at first, but with the delivery point only four miles distant, there was no strain.

With this service came another important Standard Oil plus—Standard Technical Service. Men experienced in rendering such service to contractors were assigned to the project from Standard's Joliet Division office only a few miles away. Ray Elgas and Steve Adamec, lube specialist and Chief Automotive Engineer respectively, spend hours at the site helping make sure equipment is never down for lack of lubrication or service.

Want this kind of service on your job? You can get it anywhere in the 15 Midwest or Rocky Mountain states. Call your nearest Standard Oil office. Or write, Standard Oil Company, 910 S. Michigan Ave., Chicago 80, Ill.



Steve Adamec, Standard Oil Chief Automotive Engineer, and Irvin Garms, General Superintendent for Mary Construction, discuss lubrication of Lima dragline. Lima unit, one of two draglines on the job, is powered by Caterpillar D-397 engine.



Ray Elgas (right) gets some facts about Cat operation from operator Scotty Cummings. For more than 12 years, Ray has been helping automotive customers with lubrication technical service. He qualified for this work after completing the Standard Oil Sales Engineering School. Ray also attended the University of Nebraska.



STANDARD OIL COMPANY
(Indiana)

Fleetman's

LIBRARY

REVIEWING THE BEST IN CURRENT PUBLICATIONS ON MAINTENANCE, EQUIPMENT
AND SAFETY OF INTEREST TO TRUCK, BUS AND CONSTRUCTION FLEET OPERATORS

As a special service, complete address of each source is included so readers may save time—write directly for copies of the publications reviewed

Cooling System Manual

*from National Carbon Co.
30 East 42nd St., New York 17, N. Y.*

Publication in time for winter weather of a completely new manual dealing with the operation and problems of automotive cooling systems has been announced by the makers of "Prestone" anti-freeze. Feature of the pocket-size book is that each page is profusely illustrated with pictures and each picture is number-keyed to the text.

Other features of the manual are (1) a weather protection map of the U. S. which shows the lowest temperatures observed over a period of 50 years, (2) a protection chart showing the percentage of anti-freeze required to protect cooling systems according to their capacity, and (3) a chart of a composite automobile engine cooling system showing 14 operation and service check points.

Wheel Alignment Manual

*from John Bean Division,
Food Machinery and Chemical Corp.
Lansing, Mich.*

This manual for 1957 passenger cars lists wheel alignment and front suspension specifications and service procedures, with detailed diagrams, photographs and instructions for checking and correcting wheel alignment and steering. The spiral bound, 116-page book also includes a diagnosis chart for determining wheel alignment troubles and recommended corrective procedures. It costs \$4.50.

Filler Metal Charts

*from American Welding Society
33 West 39th St., New York 18, N. Y.*

published by the American Welding Society include a comprehensive comparison of welding rods and electrodes in a 24-page, 8½ x 11-in. booklet. Brand names of 61 companies are included, 12 AWS-ASTM specifications are listed and two indexes give brands and manufacturer information. The series of filler metal comparison charts were developed to supply answers to such questions as (1) what classification is Brand X, (2) does Brand X come within the same classification as Brand Y, (3) who makes Brand X, (4) who distributes it? Price of the charts is \$2, postpaid.

Construction Lube Data

*from The Texas Co.
135 East 42nd St., New York 17, N. Y.*

This issue (Vol. 43, No. 7) of The Texas Co.'s technical publication "Lubrication" is devoted to lubrication problems of highway construction equipment. The booklet goes into the problems of complex modern day machines in relationship to the needed lubrication which confront maintenance men. Among the lubrication features are a suggested lubrication plan, discussions of the major types of oils and their capabilities and a condensed plan for preventive maintenance.

Common Carrier Booklet

*from Regular Common Carrier Conference
1424 16th Street, N. W., Washington, D. C.*

"What a Highway Common Carrier Is and Does" is designed to tell persons in every walk of life what influence the industry has on their personal existence. The booklet points out (1) that the public depends upon common carriers; (2) the need of regulations over the industry; (3) the advantages of using common carriers; (4) their importance in national defense; and (5) the setup of the industry.

Tire Service Data Book

*from Seiberling Rubber Co.
Akron 9, Ohio*

Seiberling's 1957 edition of its Product and Data book contains several sections which tell truck and bus fleet operators how to get the most service out of their tires.

Among the technical data and information are sections on load distribution, speed and load ratios, wheel and rim standardization, vehicle speed after changeovers, rim information, effect of overloading, load distribution between duals, clearance measurements, wide base rim changeovers, dual spacing data, valve data, tire and tube mounting and flaps.

Other sections include information on tire care program, batteries, and a table of weights and measures of such items as fuels, stone, and certain general cargo commodities.

(FOR RECENT MANUFACTURER'S LITERATURE, SEE PAGE 124)



Payloads jumped 500 gallons higher for Miller Petroleum Transporters

"Every time we load one of these tankers, 500 extra gallons pour down the manhole and it's just like extra money pouring into our pockets!" At Miller Petroleum Transporters, Ltd., in Jackson, Miss., you'll hear this convincing endorsement of aluminum tank trailers from J. E. Lindsey, maintenance superintendent, or from any Miller driver. Extra payload is "Reason Number One" why Miller's eight lightweight aluminum rigs will have plenty of company as other less profitable tankers are replaced.



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Your Guide to the Best in Aluminum Value



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TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS

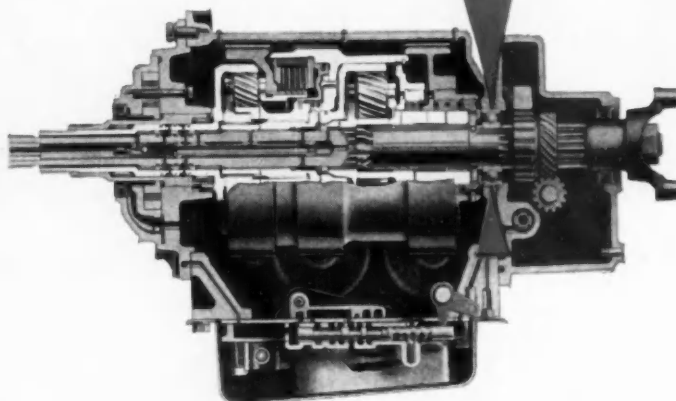
Built by Trailmobile, Inc., of Alcoa® Aluminum welding alloy 5154, Miller tankers combine the three vital advantages of light weight, high strength and freedom from corrosion. Payloads go higher. Equipment lasts longer. Cargo stays clear of contamination and tank cleaning jobs are shortened by a full two hours. For more examples of the extra revenue gained with tank trailers of Alcoa Aluminum, write today for your free copy of *The Road to Payload Profits*. Aluminum Company of America, 1876-K Alcoa Building, Pittsburgh 19, Pennsylvania.

...made for the job!

- less down time in the shop
- lower cost per mile on the road

Designed for the specific job they are expected to do, BCA ball bearings are made by a company with 50 years of specializing in bearings for the automotive field. Use them for wheel, generator, clutch, transmission and differential installations in your replacement work. You can get the bearing you need when you need it—*quickly*, from leading bearing suppliers.

BCA ball bearings are widely used as original equipment in cars, trucks, buses and agricultural machinery. They are preferred for replacement work because of perfect fit, easier installation and dependable, long-life performance. It will pay you to insist on BCA ball bearings.



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DIVISION OF FEDERAL-MOGUL POWER BEARINGS, INC.





“82% reduction in tarp repair costs after we switched to coated nylon”

—says Warren A. Taussig, Vice President of Burlington Truck Lines, Inc.

“We’ve averaged savings of 82% on repairs since we put covers of neoprene-coated nylon on our 50 open-top trailers. Besides having greater resistance to damage, these long-wearing covers can be mended in the shop with a repair kit which requires no special skill to use. This means a lot less downtime. The waterproofness of neoprene-coated nylon has eliminated costly damaged cargo claims . . . another big saving.

“The men like these lightweight covers because they are easy to handle in any kind of weather. One man can do the covering job that used to require three.”

Find out how coated nylon tarps can cut your operating costs. Ask your fabricator or supplier for information, or drop a line to: E. I. du Pont de Nemours & Co. (Inc.), 5518 Nemours Bldg., Wilmington 98, Delaware.



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**COATED NYLON FOR TARP—LONG-WEARING . . . LIGHTWEIGHT . . . EASY TO HANDLE
. . . WATERPROOF . . . RESISTANT TO ROT AND MILDEW**

NOW TRANSISTORIZED

⊕ power supply ⊕ speaker ⊕ microphone

MOTOROLA T-POWER 2-WAY RADIO



Improved Performance with Lower Operating Cost

Already famous for the lowest maintenance and operating costs in the mobile 2-way radio field, Motorola radio is an even better investment now—with T-POWER. The vibrator is gone! . . . replaced by rugged, long life transistors. Reduced "down-time", lower maintenance, and greatly improved performance *all* result from this new development. The transistorized POWER VOICE Speaker is 10 times more powerful than conventional speakers . . . talks *through* noise and can be heard hundreds of feet away from the vehicle. The transistorized Dynamic Microphone gives unprecedented voice clarity and greater communications range.

New Mounting Flexibility with Plug-In Control Head . . . Same Basic Unit can be Used for Front or Trunk Mounting

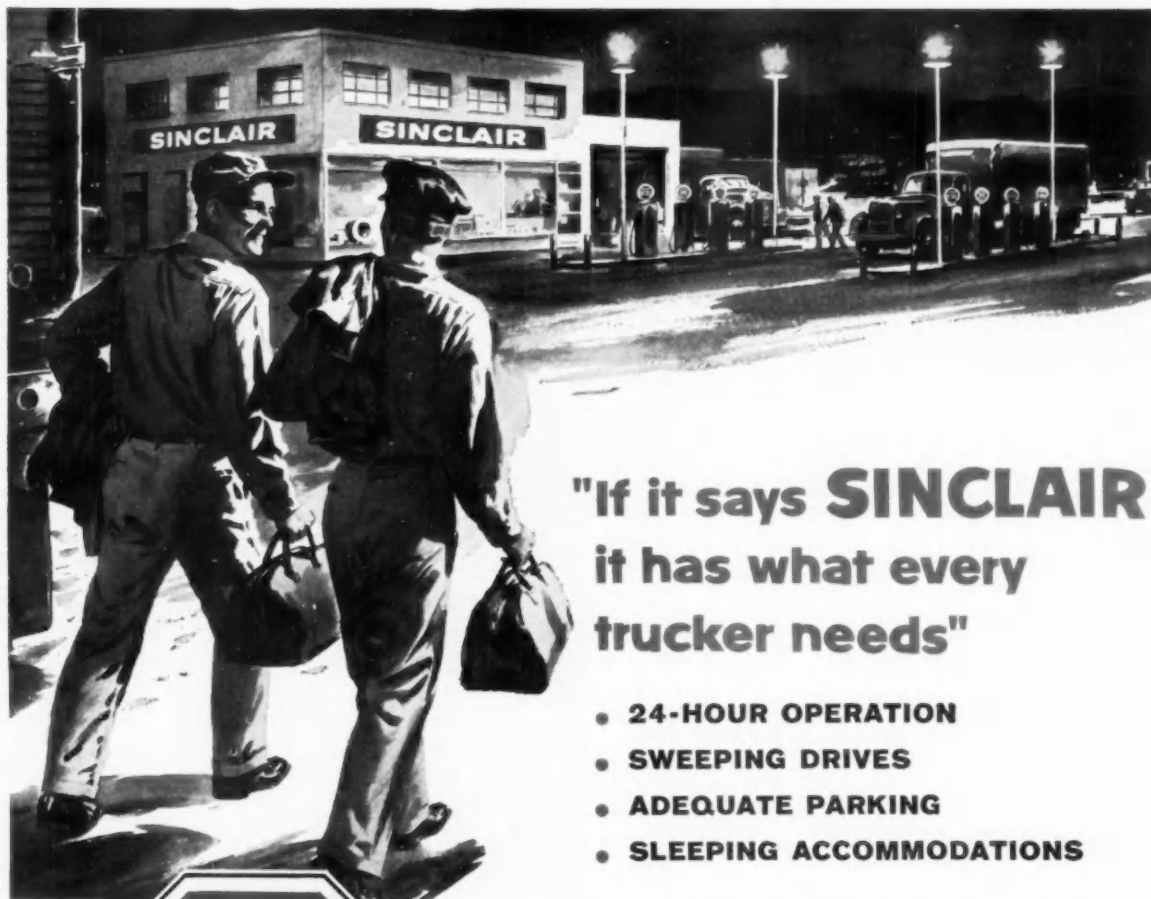
With the T-POWER radio you are no longer restricted to one type of mounting. Install the complete radio, with drawer unit and plug-in control head, for under-dash mounting. For rear mounting, the same basic drawer unit can be installed in the trunk and connected by cable to a dash-mounted control head. And—the same basic drawer unit can be interchanged with the equivalent Motorola Twin-V trunk mount models operated from a 12-volt negative ground source.

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1957 New Truck Registrations

STATE AND MONTH	Brockway	Chevrolet	Diamond T	Dodge	Ford	G.M.C.	International	Mack	Reo	Studebaker	White	Willis Jeep	Willis Truck	All Others	Total
Alabama	July 739	1	44	480	151	137	56	1		22	5	4	19	1,869	
July Mos.	1	3,909	20	307	2,995	985	834	293	14	19	173	25	45	9,708	
Arizona	July 52	282	2	242	76	46	4	6	13	2	13	2	28	775	
July Mos.	1,576	4	341	1,762	546	395	20	5	54	36	35	99	141	5,317	
Arkansas	July 853	5	70	617	128	228	8		15	5	3	2	1	1,733	
July Mos.	3,039	19	374	2,844	783	815	51		72	33	20	29	13	8,092	
California	July 3,317	44	522	3,064	509	619	48	20	48	45	65	111	499	8,809	
July Mos.	19,481	178	3,360	20,123	3,703	3,585	181	122	429	387	393	742	2,623	55,306	
Colorado	July 398	1	60	371	102	123	6	3	6	4	11	39	12	1,136	
July Mos.	2,272	16	359	2,264	635	768	74	19	60	40	153	279	104	7,957	
Connecticut	July 189	3	11	163	35	86	24	3	5	35	6	16	25	853	
July Mos.	9	1,220	39	300	1,219	276	605	163	25	37	148	64	137	4,430	
Delaware	July 102	8	21	65	15	34	14		2	4	3	2	6	276	
July Mos.	552	30	114	373	144	226	54	4	12	54	15	21	20	1,625	
District of Columbia	July 56		5	40	25	17	9	3		4		4		167	
July Mos.	590	3	49	375	98	159	25	11	3	13	7	40	48	1,421	
Florida	July 916	7	103	843	146	204	47	9	17	29	37	66	79	2,603	
July Mos.	1	5,600	57	5,436	1,123	1,340	317	84	129	258	169	409	490	10,150	
Georgia	July 574	8	45	543	94	172	18		10	33	7	8	14	1,526	
July Mos.	4,945	66	513	4,537	1,164	1,394	199	22	93	198	61	90	89	13,371	
Idaho	July 207		33	152	53	85	2		10		4	31	14	591	
July Mos.	1,163	2	281	1,006	386	441	15	2	69	13	38	195	66	3,677	
Illinois	July 991	39	161	980	208	422	91	6	21	49	14	45	71	3,115	
July Mos.	6,988	241	1,131	6,731	1,563	3,171	321	50	200	348	102	232	429	21,529	
Indiana	July 671	4	110	754	350	40	8		40	30	19	42	2	2,332	
July Mos.	1	4,094	104	3,836	1,464	1,999	175	67	288	380	44	127	226	13,742	
Iowa	July 418	11	58	448	93	261	7	3	8	18	2	5	15	1,347	
July Mos.	2,639	79	399	2,809	568	1,353	46	15	69	71	15	65	137	8,265	
Kansas	July 453	4	40	430	59	159	5	2	9	12	4	8	8	1,193	
July Mos.	2,914	29	307	2,892	509	880	22	10	83	92	25	84	49	7,996	
Kentucky	July 515	4	66	546	148	148	10	1	8	14	10	18	7	1,495	
July Mos.	3,081	22	443	2,743	642	808	69	17	83	74	63	122	51	8,380	
Louisiana	July 702	5	66	649	102	166	19	1	3	2	2	4	21	1,762	
July Mos.	5,146	34	490	4,167	805	1,065	110	37	65	73	56	69	74	12,191	
Maine	July 169		29	177	68	139	11	2	7	6	9	28	11	656	
July Mos.	5	878	5	192	873	287	604	67	2	46	37	84	175	3,321	
Maryland	July 289	1	59	285	58	98	19	9	5	11	3	18	14	871	
July Mos.	22	2,071	14	458	1,914	418	648	174	43	51	129	25	86	6,147	
Massachusetts	July 272	4	75	381	148	168	3	3	30	30	6	41	172	1,172	
July Mos.	1,856	33	494	2,259	555	1,046	170	18	41	101	277	277	77	7,353	
Michigan	July 723	6	191	842	181	189	24	6	9	34	13	38	41	2,297	
July Mos.	6,084	111	1,463	6,515	1,354	1,213	200	73	102	215	89	270	366	18,057	
Minnesota	July 438	12	68	486	71	248	14	6	13	14	6	14	24	1,414	
July Mos.	3,203	42	600	3,675	620	1,343	44	21	134	76	37	122	134	10,051	
Mississippi	July 626		38	418	61	159	18		11		5	6	8	1,372	
July Mos.	3,172	28	268	2,902	562	968	65		59	16	23	47	8	9,228	
Missouri	July 736	1	71	185	185	206	1	3	11	45	10	8	21	1,908	
July Mos.	5,237	28	531	4,000	1,193	1,443	96	21	101	244	43	56	126	13,119	
Montana	July 274		41	180	38	96	7		7	7	10	36	14	710	
July Mos.	1,251	3	217	1,078	299	663	40		69	37	60	230	71	4,018	
Nebraska	July 244	6	22	253	44	181	8		7	7	10	6	12	811	
July Mos.	1,758	49	179	1,648	374	800	39	3	41	75	30	62	82	5,128	
Nevada	July 84		7	113	9	12	1		3	1	5	261		261	
July Mos.	699	2	62	524	113	102	7		32	1	20	62	59	1,690	
New Hampshire	July 107		16	65	17	44	7	1	1	3		13	10	288	
July Mos.	3	608	2	138	555	194	328	80	4	27	22	41	125	2,215	
New Jersey	July 533	8	134	523	143	214	95	11	6	73	14	45	65	1,875	
July Mos.	83	4,699	89	1,076	3,539	1,170	1,362	470	39	69	418	74	234	13,770	
New Mexico	July 509	3	48	349	118	116	16	1	10	10	14	19	14	1,225	
July Mos.	2,412	6	213	1,394	547	464	49	21	45	40	43	84	36	5,344	
New York	July 1,156	17	111	308	1,411	1,078	36	29	107	39	28	153	4	7,153	
July Mos.	170	7,685	135	2,443	6,982	2,011	3,571	766	215	200	727	336	883	1,195	
North Carolina	July 815	2	87	548	159	151	39		11	30	13	14	14	1,883	
July Mos.	4,821	50	557	3,772	918	1,057	419	9	90	209	59	84	87	12,132	
North Dakota	July 154	1	37	140	16	127			5	1	2	6	2	491	
July Mos.	830	1	173	989	175	624	2		29	3	9	23	17	2,875	
Ohio	July 804	16	181	967	160	441	56		22	61	18	53	85	2,875	
July Mos.	1	6,331	98	1,891	7,415	1,322	2,801	486	118	174	129	425	484	21,781	
Oklahoma	July 656	1	60	642	123	192	15	6	8	21	3	22	1	1,749	
July Mos.	3,612	8	302	3,300	685	943	76	32	54	115	26	53	81	9,287	
Oregon	July 460	2	73	414	97	182	26	3	24	19	11	41	81	1,433	
July Mos.	2,617	24	435	2,276	710	960	129	34	149	211	83	349	567	8,544	
Pennsylvania	July 1,163	22	264	1,120	281	512	130	14	28	98	45	99	79	3,896	
July Mos.	84	6,391	101	1,798	6,555	1,601	2,868	830	74	255	572	250	705	22,352	
Rhode Island	July 135	1	13	68	21	20	10	1	1	3	3	2	6	276	
July Mos.	1	93	10	427	67	177	63	11	2	39	24	17	58	1,435	
South Carolina	July 371		27	262	65	65	16		4	11	5	4	4	834	
July Mos.	2,294	1	223	1,893	344	388	65	1	25	48	25	37	40	5,402	
South Dakota	July 158	1	32	160	34	146	1		3		9	16	7	567	
July Mos.	853	8	173	871	247	742	13	4	20	3	35	92	32	3,093	
Tennessee	July 483	4	47	404	76	139	17		6	4	38	4	8	1,233	
July Mos.	3,487	26	464	2,988	772	840	171	6	42	140	27	70	57	9,201	
Texas	July 2,787	16	177	2,091	200	565	61	5	29	128	32	41	21	6,233	
July Mos.	17,400	116	1,422	14,021	2,298	3,717	533	37	216	823	191	260	239	41,270	
Utah	July 132	2	30	135	43	63	3		3	6	5	8	23	474	
July Mos.	1,017	10	188	942	253	360	28	7	34	31	24	111	113	3,126	
Vermont	July 76		13	64	8	39	2		3			6	17	234	
July Mos.	523	5	104	480	177	264	23	2	31	3	79	142	44	1,861	
Virginia	July 532	2	61	397	100	139	17		4	11	11	10	25	1,328	
July Mos.	3,616	5	605	3,226	731	1,084	275	27	128	188	87	216	134	10,118	
Washington	July 821	5	134	655	159	286	36		14	15	14	51	88	1,893	
July Mos.	2,823	53	523	2,430	788	895	113	15	100	68	56	212	413	8,489	
West Virginia	July 385	6	56	457	86	99	4		2	14	13	26	34	1,177	
July Mos.	1,730	11	378	1,675	496	531	43	18	90	75	145	248	89	5,509	
Wisconsin	July 551	6	88	536	82	340	17		3	11	23	11	22	1,751	
July Mos.	2,907	19	459	2,858	561	1,493	119	24	100	117	41	154	257	9,129	
Wyoming	July 129		21	86	41	62	6		3	2	10	23	39	899	
July Mos.	761	4	116	669	257	337	31	3	31	28	39	141	21	2,478	
Total	July, 1957	57	27,725	308	4,015	25,600	5,292	1,257	190	540	1,165	548	1,258	1,881	79,117
Total	July, 1956	77	25,738	402	5,091	23,640	7,244	9,854	1,165	244	755	763	1,111	932	78,404
Total	7 Months, 1957	408	173,965	2,027	28,246	161,151	37,339	54,336	7,824	1,386	4,329	7,940	3,636	8,877	501,929
Total	7 Months, 1956	613	178,995	2,432	34,522	165,047	90,570	64,535	7,743	1,789	5,776	8,477	7,084	6,452	533,411

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none priced any lower... none so readily available!

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- Blackhawk gives you safe, sure, dependable lifting.
- Blackhawk gives you lifetime service.
- Blackhawk gives you easy maintenance with — 68% parts interchangeability.

Blackhawk gives you fast, expert service with its national network of automotive jobbers and warehouses, its world-wide franchised service depot organization.

Yes, on every count, Blackhawk gives you the *greatest jack values in history!* Call your automotive jobber today for an interesting Blackhawk "Jack-in-a-Pak demonstration. He's waiting to serve you right now.



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If it moves...
Timken-Detroit Brakes
can stop it!



Only 8 Different Parts, exclusive of wheel cylinder, the superior "DH" brake design reduces parts inventory and simplifies maintenance . . . actually 40% fewer parts than most competitive designs.



equal forward and reverse torque output. Both shoes are applied evenly with equal force and stopping action through a single, straight bore wheel cylinder.

"DH"
DUPLEX
HYDRAULIC
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Designed for heavy-duty service, greater safety, immediate response, less maintenance and easier servicing are all a part of this rugged new hydraulic brake.

Highly efficient, the "DH" brake is basically a self-energizing two-shoe brake in which both shoes do an equal share of the work . . . and are applied to the brake drum with equal effectiveness in both forward and reverse directions. Floating shoe design eliminates heel and toe clearance problems.

Far simpler, the "DH" brake has actually 40% fewer parts than most competitive designs. This results in smaller parts inventory and easier servicing.

The "DH" brake has already met overwhelming acceptance from many leading manufacturers and operators for its efficiency and design advantages.

"DH" Series Hydraulic Brakes are available in a broad range of capacities and sizes . . . to meet a variety of operating needs.

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*For every industrial, agricultural or automotive
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For the complete story on KRAFT and its many satisfied users, see your nearest General Tire distributor today! He's your best bet for every tire need!

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- Extra long mileage, top-quality materials
- Factory-approved equipment
- Factory-trained recappers
- Guaranteed service Coast-to-Coast



BY THE GENERAL TIRE & RUBBER COMPANY



Laugh it off!

DIESEL MECHANIC: "GRANDPA, I NOTICE THAT YOU'VE BEEN READING DR. KINSEY'S BOOK, 'THE SEXUAL BEHAVIOR IN THE HUMAN FEMALE.' WHAT DO YOU THINK OF IT?"

GRANDPA: "WAL, SON. PART OF IT I ALREADY KNOWED. PART OF IT I KINDA SUSPECTED. BUT THE REST CAME TOO LATE."

o o o

Gypsy Trucker: "Jim, you get to travel a lot and see the country. And you net about twenty-five dollars a week. For the life of me I can't see why you want me to give you a raise."

Timid Co-Driver: "Well, for one thing, my children have just found out that other families eat three meals a day."

o o o

Fatty Floorboarder says: "With young girls today it's not the parking problem that worries them; it's the problem after parking!"

o o o

Freight Checker: "Doctor, my wife has been in that examination room with you for an hour. What took so long?"

Doctor: "Jones, I'm sorry to have kept you in suspense. Now, I am prepared to tell you that your wife has quinsy."

Freight Checker: "Omigosh! That makes fifteen!"

o o o

Slim 'N Greasy Says: "Until a husband can get alimony by crossing his legs and winking at the judge, there's no such thing as equal rights."

1st Fleet Operator: "Yeah, there is certainly a lot of difference in the old time saloon and the modern night club."

2nd Fleet Operator: "You can say that again. In the old saloon, a wistful little girl would pull on your sleeve and whisper, 'Daddy, dear Daddy, come home with me now,' and you paid no attention to her."

1st Fleet Operator: "How true, brother, how true. But in a night club now, a wistful little girl pulls at your sleeve and whispers, 'Daddy, dear Daddy, come home with me now,' and you do."

o o o

"Every drunken driver needs a cop for a chaser."

— Cici Jay —



THE AUTOMOTIVE PARTS CLERK WAS OUT RIDING WITH A NEW DATE, A BLONDE BOMBSHELL.

"GEE," REMARKED THE BLONDE, "MY SHOULDERS SURE HURT FROM MY SUNBURN. I THINK I'LL TAKE OFF MY COAT."

"GO RIGHT AHEAD, HONEY," SAID THE PARTS CLERK.

THEY DROVE ALONG A LITTLE FURTHER AND PRESENTLY THE BLONDE SAID, "GOSH, MY FEET HURT. MIND IF I TAKE OFF MY SHOES?"

"NOT AT ALL," REPLIED OUR PARTS MAN, "AND SAY, HOW ABOUT GOING HORSEBACK RIDING WITH ME ONE OF THESE FINE NIGHTS?"

o o o

Cici Jay says: "When trying to catch a husband, gals, play like a fisherman. Wiggle the bait once in a while."

o o o

Sales Agent: "Sir, I have something here which will make you popular, make your life happier, and bring you a host of friends."

Maintenance Superintendent: "I'll take a couple of fifths."

o o o

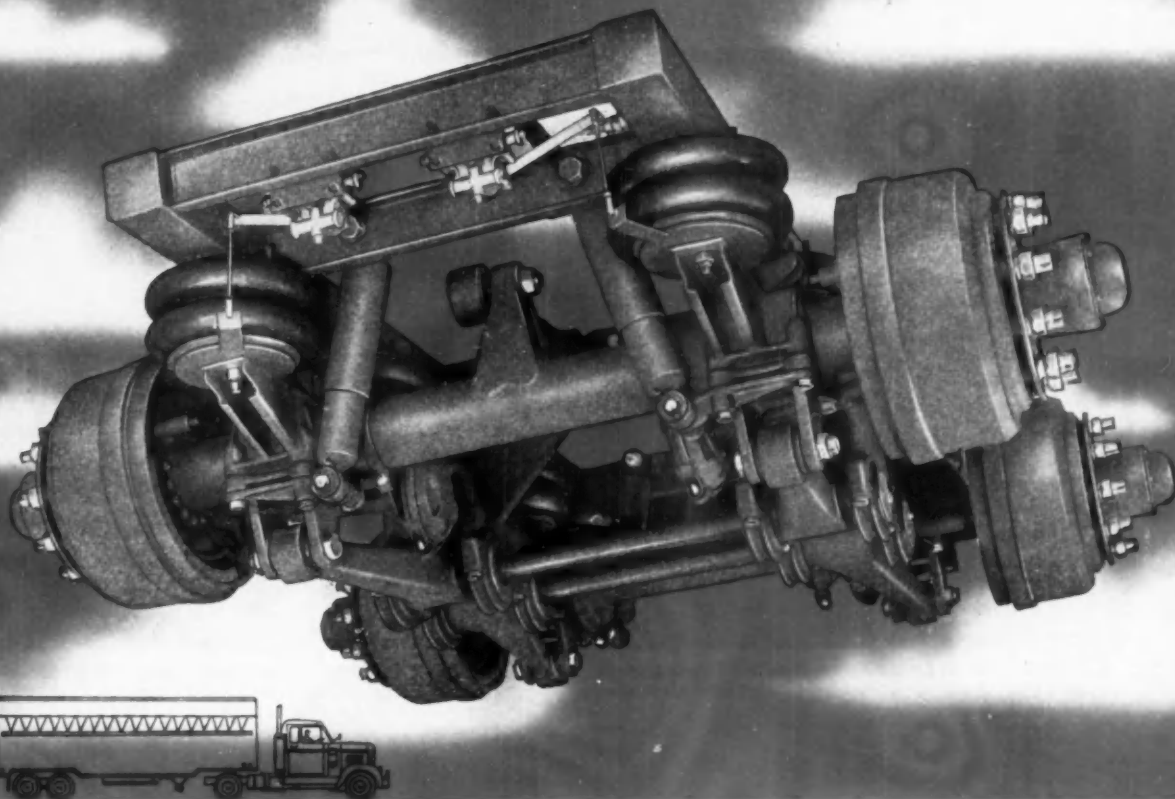
Girls are just like cigars. A fact you must admit; You can't enjoy them properly Until you get them lit.

o o o

Carburetor Specialists: "My, but that's a beautiful necklace you are wearing tonight, dear. I can't remember buying that for you."

Wife: "You didn't buy it for me, dear. I found it under the back seat of your car."

Resume Work



TONS OF HIGHWAY CARGO FLOAT ON AIR

**with the new Clark Air Suspension System
for semi-trailers**

Damage to fragile goods—to perishable cargo—to empty running vehicles can be *minimized* by the new Clark Air Suspension unit.

Smooth, soft ride...

Doughnut-shaped "air-springs" carry full weight of trailer and cargo, absorb road shock, "flatten" even rough highways to a surprising degree. Ride actually approaches passenger-car softness!

High stability...

Lateral roll and sway are minimized by ingenious system of pivoted torque arms and torsion bars which take full force of side loads and absorb torsion resulting from brake torque.

Automatic load leveling...

When loading or unloading trailer, air reservoirs automatically adjust to support trailer bed at normal running height.

Versatile package unit...

All Clark Air Suspension assemblies come as complete packages, ready for installa-

tion. Parts are interchangeable between single and tandem units. Either suspension assembly can be used on new trailers or those already in operation.

Lower maintenance costs...

Because compressed air does the flexing and rubber mountings are employed, no lubrication is needed. Tanker operators will find that tank splitting and cracking of returning "empties" is minimized. Operators of other types of trailers will also find their trailers lasting longer and requiring less maintenance.

Weight advantages...

Trailer manufacturers using the Clark Air Suspension System can lighten frame and body construction, increase longevity—without sacrificing load-carrying ability.

This unique undercarriage, suitable for installation on new or in-use semis, allows both trailers and cargo literally to "float on air"!

Why not investigate...

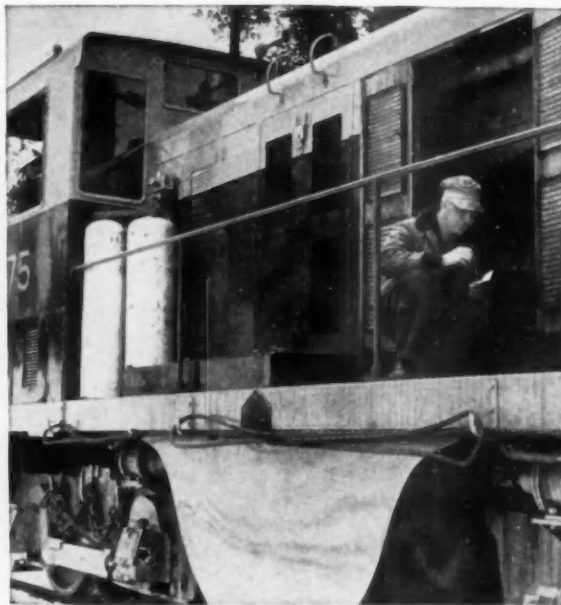
Whether you manufacture highway semi-trailers or operate them...whether you haul eggs or engines...whether one trailer or a hundred are involved...it will pay you to get the facts on Clark's new Air Suspended Trailer Axles. Ask us for detailed, illustrated Brochure No. AS-500

CLARK EQUIPMENT COMPANY
Buchanan 3, Michigan





A single drop of used oil from this truck indicates true condition of the vehicle's oil . . . and tells a lot about the engine's operation.



Daily oil checks assure maximum lubrication efficiency in this diesel locomotive.

Now—they're testing used oil in minutes

THE NEED for a fast, accurate and practical method for determining the condition of used oil has long been one of the more serious problems confronting fleet operators. It's obviously wasteful to discard still-good oil, but operating a vehicle with contaminated oil could lead to costly engine damage. This was an unsolvable condition which maintenance men had come to accept.

Since no two vehicles, even of the same make and model, are identical in performance or operation, maintenance men were compelled to compromise on oil change "averages" recommended by engine manufacturers. This procedure is uncertain and costly. Fortunately, this operating conflict has been resolved with the introduction of a simple but completely reliable oil check system . . . the Shell ADC Oilprint Analysis.

The ADC Analysis was primarily conceived to determine proper oil change intervals for individual engines. However, it goes much further. It is capable of actually reducing engine maintenance costs by disclosing certain mechanical defects *before* they have caused serious engine damage.

The test procedure is very simple . . . requires little

practice to perfect . . . and provides a reliable check of oil from merely two drops of used oil. In minutes, the degree of Alkalinity, Dispersancy and Contamination can be determined easily.

Here are several typical examples from various areas of the country. They show how fleet operators, employing both diesel and gasoline engines, have successfully and profitably applied the ADC program.

A Kansas City Freight Line

Operating a large fleet of trucks, one Kansas City freight line previously had drained and replaced oil every 3,000 miles. After adopting the ADC Oilprint Analysis, individual test charts showed that, in most cases, drainage would not be necessary at less than 6,000-mile intervals. Even at this doubled interval, engine life was not affected. Further proof was established when these engines were inspected at 87,000 miles and no appreciable wear was found on bearings, pistons, rings or valves.

An Idaho Logging Operation

Oil had previously been drained after a limited number of hours of use on an Idaho company's diesel loco-



Substantial oil economy is realized in this tractor, because oil is changed only when indicated by the Oilprint.



Taking a quick "fingerprint" of crankcase oil from an interstate carrier.

tives. With the ADC Oilprint Analysis as a guide, the oil-change interval has now been safely increased many-fold. The savings made possible by this on-the-spot test in oil, filter change and labor costs were considerable. Furthermore, leaky head gaskets are frequently discovered before any serious engine trouble develops. Here is another valuable plus for the ADC Oilprint Analysis.

A Washington, D.C., Transit Company

This transit company operates a large fleet of buses with both gasoline and diesel engines in use. With the difference in operating schedules . . . rush hours, short and long hauls, around-the-clock schedules . . . both engine types were believed to require complete oil changes every 2,000 miles. When the ADC program was instituted, the tests showed that oil-drain periods and minor maintenance checks could be safely extended to every 3,000 miles for gasoline engines and 4,000 miles for diesel engines.

Fleet operators, who are concerned with extending the service of crankcase oil and avoiding the risk of using contaminated oil, are invited to sit in while a Shell service engineer demonstrates the time-and-money advantages of an ADC Oilprint Analysis program.

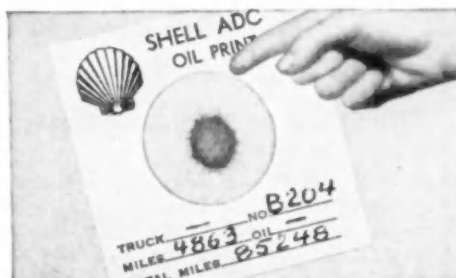
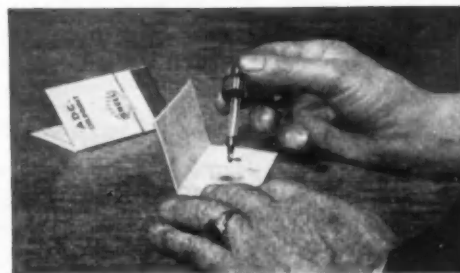


Photo shows an oil-spot test card . . . one phase in the visual life record of a change of oil.



One drop of a special indicator* fluid developed by Shell checks the alkaline reserve in the oil.

*Indicator Fluid U.S. Patent No. 2,770,530

SHELL OIL COMPANY

50 WEST 50TH STREET, NEW YORK 20, NEW YORK
100 BUSH STREET, SAN FRANCISCO 6, CALIFORNIA



Motorists Hate Trucks That . . .

- Are double parked
 - Are tail-gating
 - Block narrow streets
 - Hog passing lanes
 - Crawl up hills
 - Have noisy exhausts
 - Have smoky exhausts
 - Race down hills
 - Exceed speed limits

Motorists are Taxpayers. Taxpayers are Voters. Voters elect Congressmen. Congressmen pass laws. Laws govern trucks. Unnecessary laws cost the company money. Money spent to obey unnecessary laws can't find its way into your pay check. Your pay check makes your wife happy. Want to make her happier? Don't make motorists hate your truck.

4000 Sealing Valve Core

8106B Trutest
Special Gauge checks
all other gauges

7188BN All-Purpose
Service Gauge
for all service needs

880 Sealing Valve
Cap

Service package
of 100
Schrader Caps

Service package
of 100
Schrader Cores

Good fleet shop practice pays off with GENUINE SCHRADER TIRE VALVES, CAPS, CORES, AND GAUGES

Most flats give ample warning for you to catch 'em in the shop. And keeping valves always capped and properly cored should be a must in your fleet's shop practice. Make it a rule to:

- 1 Specify genuine Schrader Tire Valves, Sealing Caps and Cores, which are guaranteed airtight even at 250 pounds pressure.
- 2 Keep stocked on Schrader Caps and Cores with handy service packages and see that every valve is always capped.
- 3 Gauge and record air pressures daily with genuine Schrader gauges to catch unusual pressure drops.

And, remember, Schrader Chucks, Couplers, Chuck Gauges and Accessories help airlines operate faster and better.

A. SCHRADER'S SON • BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Company, Incorporated

Schrader
a division of **SCOVILL**

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT



Whether you own one truck or four



a score of trucks or more



you can't buy a truck tire that costs less
per mile than **Firestone**

BETTER RUBBER FROM START TO FINISH

Enjoy the Voice of Firestone
on ABC television every
Monday evening at 9:00 E.S.T.

OPERATOR RECORDS PROVE

Firestone Tubeless Truck Tires give extra mileage on original treads, take extra retreads, reduce road delays, cut maintenance costs to a minimum.

Copyright 1957, The Firestone Tire & Rubber Company



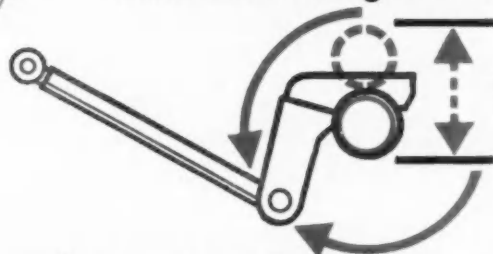
HEAVY-DUTY TRANSPORT SUPER TRANSPORT TRANSPORT® SUPER ALL TRACTION SUPER MILEAGE LUG RIB EXCAVATOR ROCK GRIP EXCAVATOR® ALL TRACTION®

...greatest tandem safety feature!

The New Axle Stabilizer*

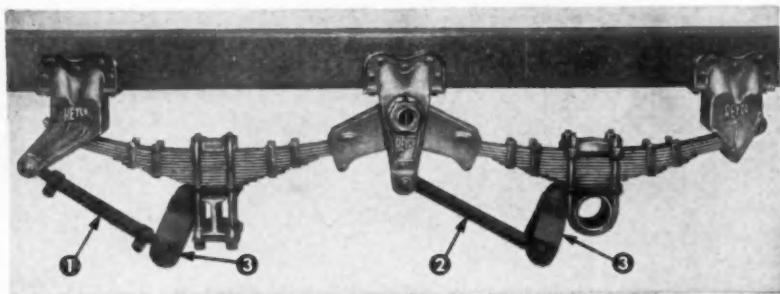
REYCO®

Full Leverage Braking Torque Control



**ELIMINATES
AXLE HOP**

► **Reduces Stopping Distance by as Much as 50%**



REYCO

**"22" SERIES TANDEM
with AXLE STABILIZER**

Illustration at left shows component parts of Axle Stabilizer

- (1) Adjustable torque arms supplied for right side.
- (2) Rigid torque arms supplied for left side.
- (3) Axle attachments. (Available for tubular or I-beam axles.)

Now for the first time there's full-leverage braking torque control for trailers and tankers! The new Reyco "22" Series Suspension with AXLE STABILIZER represents the greatest and most significant engineering achievement since the introduction of new, lighter-weight trailers and tankers for greater payloads. Only Reyco, with the new (patent pending) Axle Stabilizer, assures complete safety of operation for such vehicles...empty, lightly-loaded or full...without damage from axle hop. The Reyco Axle Stabilizer, by eliminating axle hop, creates the badly needed safety factor for these lighter vehicles...also reduces tire wear and cupping, downtime and driver fatigue, too. Now, truly, whatever the load, you can give your equipment and cargo a REYCO SAFE-T-GLYDE RIDE!

► **Put your vehicles on the road with full confidence . . . greatest safety!**

The trend to lighter vehicles for heavier payloads created suspension unit problems that only Reyco Engineering has solved! The new Reyco "22" Series Tandem with AXLE STABILIZER eliminates axle hop! Reyco's exclusive (patent pending) Axle Stabilizer keeps tires hugging the road, absorbs braking torque within itself instead of transferring it to vehicle!

With the elimination of axle hop and with constant tire traction achieved, the new Reyco "22" Series Tandem with AXLE STABILIZER reduces stopping distance by as much as 50%. Uncontrolled braking torque no longer can "push" the vehicle into an accident. Vehicle fatigue caused by the hop, skip and jolt of spring windup in the suspension unit is eliminated!

NATION-WIDE SALES & SERVICE

REYCO®

T-357 COPYRIGHT 1957 REYNOLDS MFG CO.

*PATENT PENDING

REYNOLDS MANUFACTURING CO.

SPRINGFIELD, MISSOURI



New diesel-powered INTERNATIONAL tractors are offered in three models—one single axle and two tandem axle—each with four wheelbases. GCW—68,000 to 76,000 lbs.

Cost records prove International Trucks

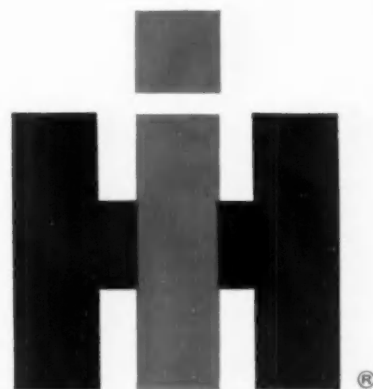
INTERNATIONAL TRUCKS



Top of engine and entire left (accessory) side are open for convenient service when insulated engine cover is removed. Access to front of engine is through wide opening hood. Right side of instrument panel is easily removed for increased working area.

You can pull bigger payloads, coast to coast or city to city, re-

cost least to own!



65



IN BODIES Fleets Ask for More Space

Builders answer with lightweight metals and plastics, new designs and a

TRUCK BODIES have come a long way since the days when they were little more than wooden boxes on wheels. While they're still only slightly related to the "dream truck" designs of the immediate post-war years, current models have distinctly modern styling.

More important, however, body designers have shown imagination and skill in developing a variety of specialized bodies while holding costs down through maximum use of standard, mass-produced parts.

Current body styles are

a direct result of the demands you, the customer, have made on body builders and designers. Among your basic demands:

- Maximum payload with minimum body weight . . . in small delivery trucks and big dumpers.
- Strong bodies that will last under heavy use with a minimum of maintenance.
- Bodies designed for easy maintenance and quick repairs.
- Efficient insulation, adequate air circulation, and corrosion resistance in refrigerated bodies.
- Delivery body designs which permit the driver to work his load rapidly with a minimum amount of effort and fatigue.
- Special-duty designs for a variety of purposes, ranging from mobile auditoriums to fully-equipped mobile shops and offices.
- Attractively designed trucks which may be used as an effective part of your sales promotion program.

Probably one of the most

successful accomplishments in recent years has been in reducing body weight while retaining needed strength. Whichever side you take in the "Aluminum vs Steel" argument (and it's still going strong) you have to acknowledge the accomplishments of the competition. In general, body builders have had considerable success in cutting weights through use of aluminum, high-tensile steel, magnesium and plastics.

Can you expect plastic bodies in quantity in the near future? Not very likely. From Robert H. Hackney, Hackney Bros. Body Co., Wilson, N. C. came this comment: "We have done quite a bit of experimental work with plastic and other new type body manufacturing materials. However, we feel that plastic is still another seven to eight years away before it will be economically feasible to use too much of this type construction."

There's a trend to both

bigger and smaller delivery bodies, according to comments from two body builders. Growing demand for larger lightweight bodies is reported by J. B. E. Olson Corp.'s Sales Promotion Manager Edgar Parker. But Sterling Keller, Boyertown Auto Body Works, Boyertown, Pa. also notes a growing demand for smaller, more compact bodies.

Parker traces the demand for larger bodies to operators' need for increased volume to cover high manpower costs and the increased service demands of



Less Weight

continuing search for new materials

large suburban stores. He reports that the company is now building 15 and 16-ft aluminum bodies on 154-in. wheelbase, forward control chassis with ratings of up to 18,000 lb GVW and payloads of up to 12,000 lb. An Olson body is shown in Photo 4.

Comments Boyertown's Keller: "The trend in delivery bodies is to a smaller, more compact unit, providing large loadspace area, easy driver operation and access to loadspace, and shorter wheelbase. It is necessary, in many instances, to be able to furnish a body complete with interior shelves, racks, and many other provisions for handling the various commodities which are handled in the vehicle."

Three refrigerated units indicate design trends in this type of body. They include: an
(TURN TO NEXT PAGE, PLEASE)

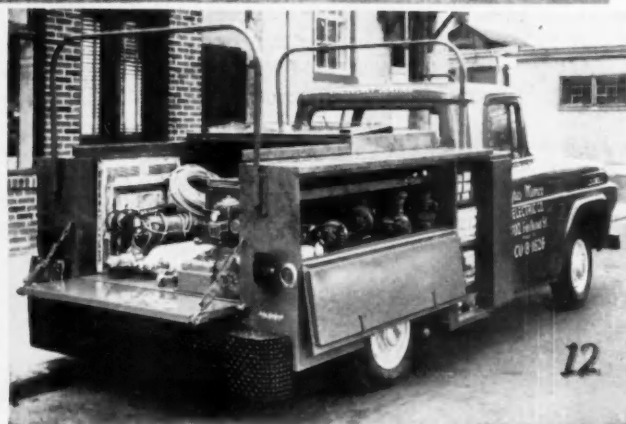
Current trends in body design are shown here and on the following pages. Above: (1) Boyertown Body Works' new "Merchantvan"; (2) Interior shot of a mobile butchershop, also by Boyertown; (3) a new Utility body, used with a trailer as an auditorium on wheels; (4) An Olson Kurb Side aluminum delivery body by Grumman; (5) A Metro short-haul moving van; (6) A mobile parts shop; (7) A new drop-frame beer delivery truck by McCabe-Powers Body Co.; and (8) Aluminum Body Corp.'s new dump body which comes with a 90 in. inside width and 96 in. outside width

COMMERCIAL CAR JOURNAL, October, 1957



IN BODIES

Continued from Page 67



ice cream body (Photo 9) designed by Revere Copper and Brass, Inc., and built by The Schnabel Co., Pittsburgh, Pa., a retail milk delivery truck (Photo 14) recently introduced by Aluminum Body Corp., Los Angeles, Cal., and a refrigerated bakery truck (Photo 16) built by Boyertown Auto Body Works.

The milk truck makes extensive use of aluminum and plastic. Shatterproof fiberglass-reinforced plastic is used in the roof, front end, inside lining and floor. Exterior construction is of heat-treated lightweight aluminum sheets and extrusions.

Specialized body application

is reflected in Scott Paper Co.'s new mobile conference room (Photo 3). It has a Utility Truck Inc. body on a forward control chassis, and a four-wheel trailer which may be set up as an auditorium. The body carries generating equipment for lights, air conditioning for the trailer, projectors, storage space for products to be shown and maintenance equipment. The body has modern and unbroken side panel treatment which offers maximum space to carry the company's advertising message.

Other specialized bodies illustrated are:

- Interior view of a butcher shop on wheels (Photo 2) built by Boyertown Auto Body Works, it has a built-in refrigerator.
- Mobile parts shop (Photo 6) carries a complete selection of parts to Matthews Sales Co.'s customers. It is equipped with a block and tackle, anchored to the rear panel of the body, for handling engines, also has bins and shelves for convenient arrangement of the parts.
- A new crash truck (Photo 11), manufactured by Reading Body Works, Inc., Reading, Pa. and now used by the Waynesboro, Va., First Aid crew, carries its own power plant to generate electricity for portable floodlights, plus two-way mobile radio equipment. It was adapted for service by Baker Equipment Engineering Co., Richmond, Va.
- A "job-planned" utility body (Photo 12), designed by Reading Body Works for electrical contractors, air conditioning and refrigeration servicemen, has a sliding waterproof top and storage space for service tools and equipment.
- International Metro Van (Photo 5) is used by Crocker Transfer & Storage Co., Corpus Christie, Tex., for local pick-up and delivery. Not illustrated is International's Metro-Lite body which combines aluminum and magnesium alloys with fiberglass plastic to reduce weight.
- A new style of palletized beer delivery truck is illustrated by one of Carling Distributors Inc.'s new fleet (Photo 7). Built by McCabe-Powers Body Co., St. Louis, Mo., they feature drop-frame design which carries the load lower so drivers can reach all the mer-

More examples of current body styles include: a new ice cream body (9) designed by Revere Copper and Brass, Inc. and built by The Schnabel Co.; (10) The Press Triple Tapered Dump Body, which is tapered from front to rear and bottom to top; and two special purpose units built by Reading Body Works for (11) emergency service and (12) as a service truck for contractors on utility bodies

chandise without unnecessary climbing. They also have aluminum sectional doors that roll up easily.

● Thompson Trailer Corp.'s "Lo-Loader" (Photo 13) is an elevator-type body which may be raised or lowered for convenient loading and unloading. (See: "Truck's Body Goes Up and Down," July, page 102.)

● Aluminum Body Corp.'s new "Bob Tail Van" (Photo 15) in which interior posts have been eliminated. The new body has a 92½-in. width. Other features include an "armor plate" aluminum exterior skin, continuous roof roll which dispenses with the need for top corner castings, and two side skid rails 1¼ in. by 6 in. high.

● Andrews Trailer Co. new forward control body is available in either aluminum or steel. It uses pre-punched riveted airplane-type construction for easy replacement of components.

New lightweight dump

body from Aluminum Body Corp., Los Angeles, Cal. (Photo 8), has new sectional construction of Reynolds aluminum to give the unit inside dimension of 90 in. and outside dimension of 96 in. It uses 12-in. wide aluminum extrusions with integral stiffener channel, has interlocking construction and an integral floor.

A different type of dump body (Photo 10) was recently introduced by Jacob Press' Sons, Inc., Chicago, Ill. Known as the "Triple-Taper" dump body, it is wider at the front than the rear, and is longer at the bottom than at the top. It is primarily designed for hauling sand and gravel. The new design allows for greater load on the front end to take advantage of state weight laws.

In the small dump body field, the Anthony Co. recently introduced a 1½ cu yd capacity dump body for use on a 1-ton truck chassis. The 8-ft body is made of 12-gage steel, has a single cylinder hydraulic hoist with a 61-in. stroke.

Plastic components are

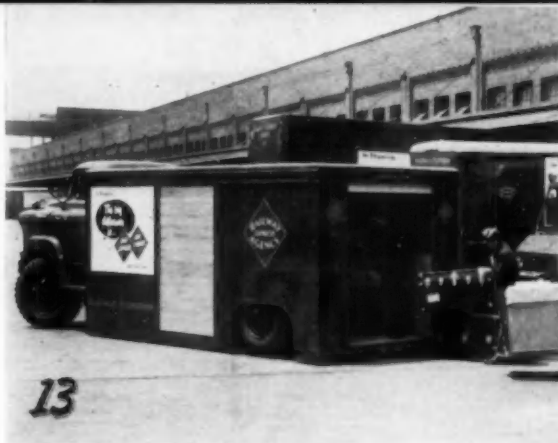
finding a place in current body styles. For example:

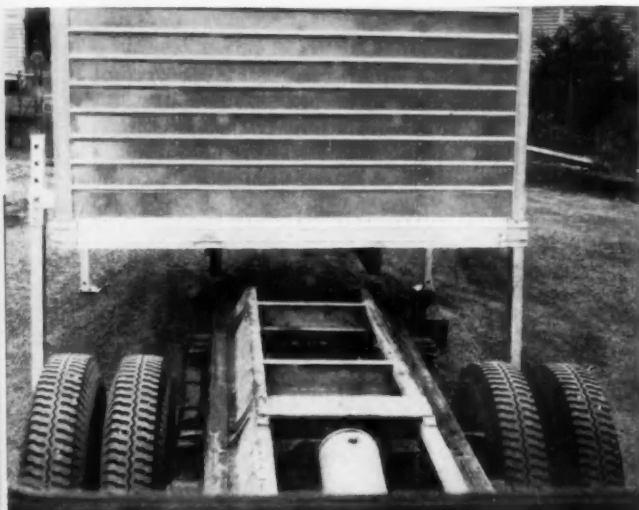
● Aluminum Co. of America offers foamed-plastic insulated panels which may have aluminum, wood, glass, porcelain or other materials laminated to a rigid core of foamed plastic.

● Strick Plastics, Perkasi, Pa., has developed an all-plastic door for refrigerated truck bodies. Core is a fiberglass reinforced polyester laminate, while the door pan is vacuum formed from a high strength copolymer thermoplastic sheet.

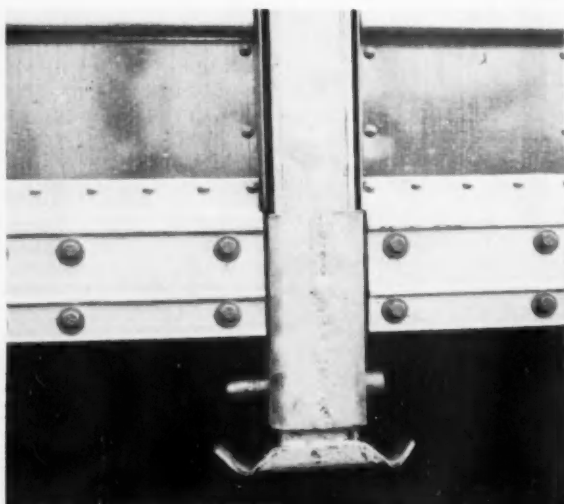
● Ververay Corp., New York, has introduced a new waterproof fabric for truck roofing. It is composed of nylon fabric laminated between two layers of vinyl film. Metropolitan Truckers Co., a division of the Hertz Co., is currently using the material as the outer permanent roof structure on its vehicles.

Thompson Trailer Co.'s "Lo-Loader," (13) with an elevating body is an example of ingenuity body builders show in meeting operators' needs. Aluminum Body Corp. recently introduced two new body designs, a refrigerated dairy body (14) and a "Bob Tail Van" (15) in which interior posts have been eliminated. The refrigerated bakery unit (16), by Boyertown Auto Body Works, is a new application





Sloping sides of chassis-mounted lift gives tractor operator enough working leeway when he backs under body

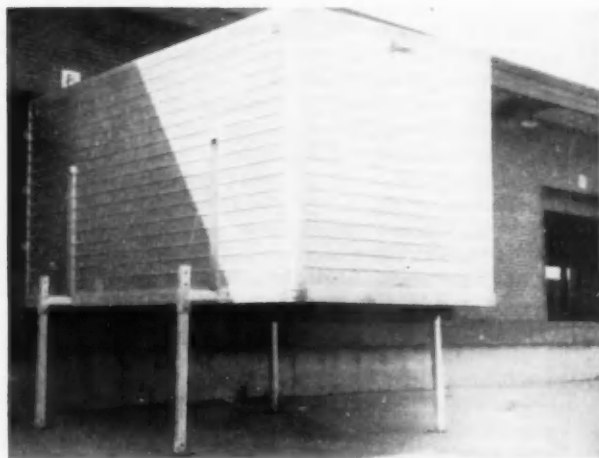


When not in use, legs ride nested in side of the container, held tight by heavy pin through sleeve. Dished foot gives legs firm support even on bare parking area

Chassis-mounted hoist hydraulically lifts container from chassis to clear truck frame before stilts are lowered



BODIES ON STILTS



Legs on 16-ft container parked at loading dock easily support the maximum recommended road load of 16,000 lb

DETACHABLE BODIES on stilts give Moore-Handley Hardware two advantages . . .

Power units are kept on the go, are not tied-up waiting for loading to be finished, and . . .

It's possible to route-load in one city for delivery in another, eliminating a rehandling at destination.

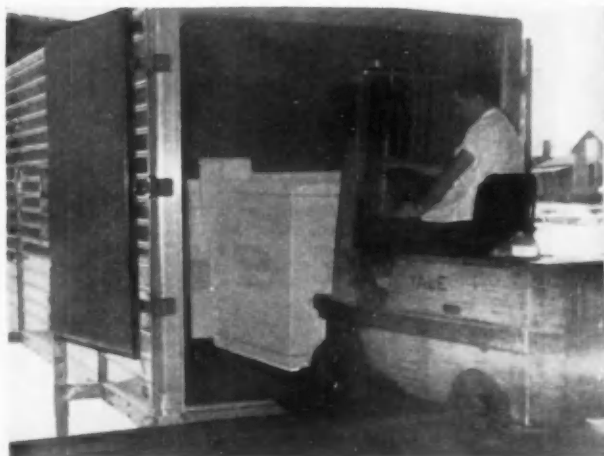
In fact, the fleet likes the system so much that it also manufactures and markets it under the trade name "Morhaul."

This is how the system works:

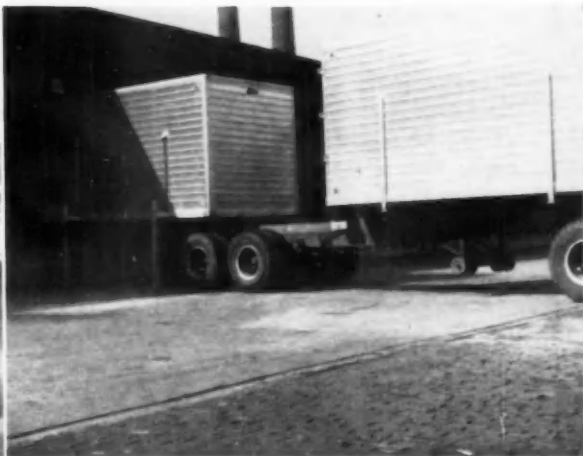
At Birmingham, Ala., the loading dock is lined with cargo bodies held at dock level on long legs. These boxes are loaded throughout the day as orders are made up. When a body is fully loaded for local delivery, a truck with a special cradle slides under the container. A power take-off-driven hoist raises the cradle to the box. Tie-clamps are secured, and the legs raised. The hoist then lowers the box onto the truck chassis, and the truck starts out.

KEEP POWER UNITS WORKING

Detachable containers simplify cargo routing for Moore-Handley Hardware



A fork-lift truck is used to load freight onto one of the containers at Moore-Handley's Birmingham warehouse



A half-loaded trailer pulls out to pick up next load of cargo after first dropping off freight in body on stilts

For deliveries that will first move intercity, the procedure is different. For example, when a Nashville box is ready, a truck slides under it and raises it about five inches. With legs untouched, the Nashville body is placed in front of a body loaded for Decatur. The truck drives away and a semi-trailer chassis rolls back under both boxes. They are secured and the trip begins.

At Decatur, the trailer drops its rear box. If it is route-loaded, the box will be left in the yard where a straight truck chassis picks it up for delivery at various points in the city. A stock-loaded box would be left at the loading platform. The driver replaces the Decatur box with an empty. (Ed Note: It could be a return load in other types of operation.)

At Nashville, the rig backs up to another empty box and deposits the Decatur empty in front of it. It then drops the loaded Nashville body. The long-haul driver then picks up the two empties, secures them, and heads back to Birmingham.

The truck-mounted body cradles are hydraulically raised and lowered. A central piston between cradle and frame is driven by a power take-off. Four arms at the corners of the cradle are connected to the frame. As the box rises, these arms carry it up and back. They raise the cradle evenly no matter how unbalanced a load might be.

The cradle has beveled outer sides. A driver can be up to six inches off center and yet the box will slide down into place as the cradle raises it off the ground. Likewise, bevels on the front ends of the stringers under the body will slip it back into place if the driver should be as much as three inches too far under the box.

Normally a cradle is hoisted about 6 or 8 in. to set the legs so a truck can move out from under it. If a bump, curb, gutter, or ramp threatens to boost the tail of the cradle enough to scrape the underside

(TURN TO PAGE 118, PLEASE)

RESIN SPEEDS BODY SHOP WORK

Body repair is not a new subject to COMMERCIAL CAR JOURNAL readers. Latest techniques have been reported just as soon as they've been announced. For example . . .

- Inert Gas Welding for Truck Body Work . . . Mar. '54, page 86.

- Aluminum Tank Repair Is Easy . . . Sept. '54, page 94.

- Plastic Bodies Are Easy to Repair, Feb. '55, page 94.

Now, here's the how-to-do-it story on the use of epoxy resin compound in fixing the dents, gouges and tears suffered by the average truck in the course of its day's work.

Epoxy resin compound can be used by itself (similar to body solder), with fine screening or steel wool reinforcing, or—as illustrated here—with a spot-welded metal patch. Applied and exposed to air, it sets to form a solid that can be sanded to a smooth finish for painting. It also can be sawed, filed or drilled. It does not rust or corrode.

Photos on these two pages were taken in an actual fleet shop, are used through the courtesy of Ren Plastics, Inc., Lansing, Mich.



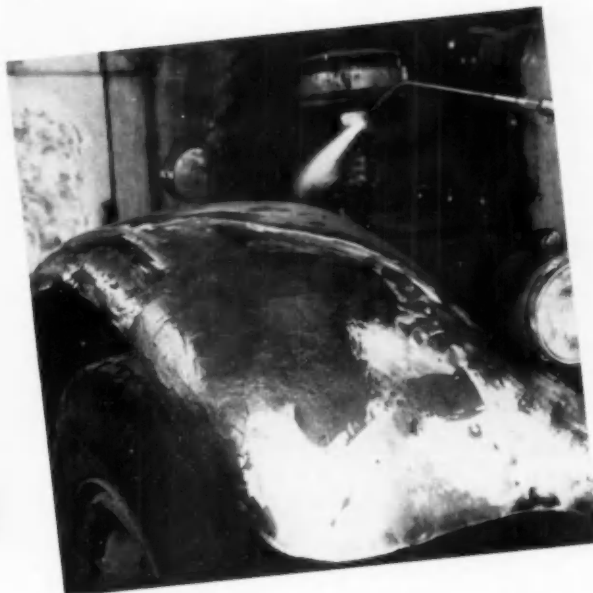
1. Area to be repaired must be cleaned down to the bare metal. In this case, size of hole made it necessary to spot weld a steel plate into the fender. Sanding job is finished with No. 2 disc



4. Rough filing is next step after compound hardens. This removes excess material, gives approximate shape to repaired area. Once hardened, resin compound does not clog files or sanding discs



2. Sufficient compound for the job is mixed from epoxy resin and a hardener. It is applied to the damaged area with a rubber squeegee. Exposed to air, it reacts chemically to form solid material



3. Compound spreads like putty, will harden in about 2 to 4 hours at room temperature. With use of heating torch, as shown above, the time can be cut considerably. This job hardened in 6 minutes



5. Repaired area is then feathered-out with sanding disc to give smooth paintable surface. Note that edges of spot-welded steel patch are not visible after being filled-in with resin and sanded



6. When repaired area has been repainted, following standard procedures, resin covered area is not visible. Ease of application and speed of repair are advantages of using epoxy resin material



Design of milk delivery truck above is reflected in package design below

Fleet's Appearance Boosts Product Recognition

"Total brand image" is achieved through use of same graphic elements on trucks, packages



VAN INTEGRATED design for its truck fleet, its product packages and its dealers' window displays is being used by Martin Century Farms, Lansdale, Pa., to boost product recognition.

The new design, which links the Martin products into an easily recognized family, will appear on each of the company's 220 Divco milk delivery and refrigerated trucks.

Using Master Motif

Created by Mel Richman Design Associates, Philadelphia, the master motif is featured in packages for Martin's complete line of dairy products—milk, ice cream, cottage cheese, butter, margarine and eggs. It is also used in the company's letterheads and is the proposed exterior design for its branch plants.

According to Martin executives, the design program was motivated by a need for stronger brand

identification to meet the growing trend to self-service selling of dairy products.

"Total Brand Image"

In the Martin design program, stronger brand identification was achieved by utilizing the entire surface area of the trucks, signs, displays and packages to create a distinctive and appealing "total brand image."

The customary method of brand identification is through limited design components such as trademarks or logotypes.

In a series of visual tests by the designers and the company, the Martin Century Farms trucks and packages retained their design personality at great distances.

Here's how Martin's "total brand image" was es-

(TURN TO PAGE 120, PLEASE)

Updating Your Body Cleaning and Painting Pays Off



UP-DATING your body cleaning and painting procedures with new techniques pays off. Once you have spent a lot of money for new trucks, it's only common sense to get the most out of your investment through . . .

- More sales appeal with an attractive body design (such as that illustrated on the facing page), and . . .
- Longer body life resulting from a clean and properly painted body's relative freedom from corrosion.

Results of a good cleaning program, like those of a public relations program, are not all on the surface. Don't underestimate the effect a clean truck has on your customers' and *potential* customers' opinions. There's no sure way of rating the effect of clean equipment on your drivers' pride and morale.

And, unless you are the exception, you probably can't tell what effect your cleaning methods have had in increasing or decreasing the life of your paint jobs, or of the bodies themselves. Body builders will tell you, however, that truck bodies—like human bodies—will last longer if they're given proper care.

If you've been using the same methods and materials for several years, it would be a good idea to look into the new equipment and compounds that have been recently developed. Chances

are you'll discover new ways to get better cleaning.

And while you're considering possible improvements, it will pay you to find out if you're giving the hidden parts of the body and chassis proper care. In some fleets, and yours may be among them, a wash job includes only the upper parts. As a result, some trucks go on year after year with a thick layer of muck on the underneath.

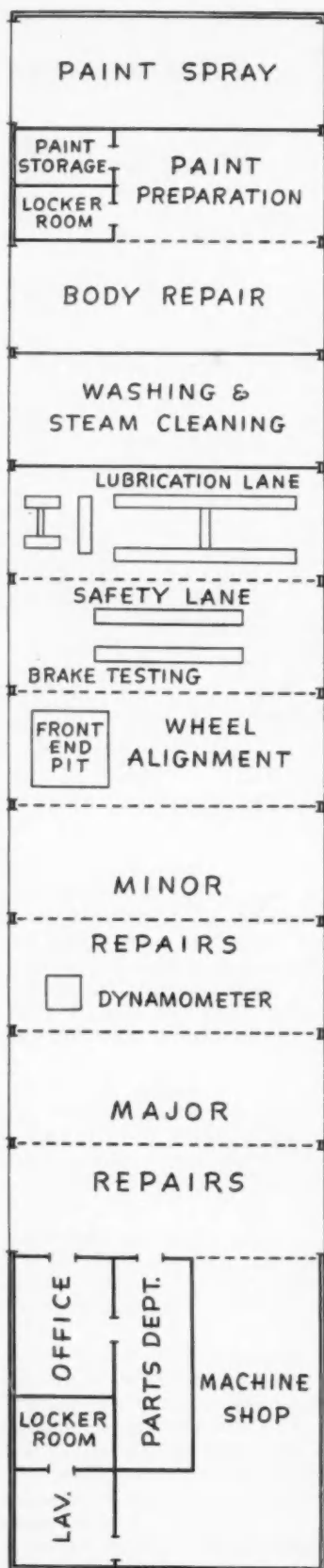
While it's dry, the muck is impotent. But in wet weather or snow conditions the acids and other ingredients are activated and go to work on the underbody protection, especially those parts exposed to the sandblast of the wheelwash.

An effective repainting job starts with the stripping of the old finish. Choice of the stripping compound depends on the method by which it will be applied. The three most common methods are:

- **Brush-on:** This is the most basic method, uses only a brush to apply the stripper. It is often used on vertical surfaces that would quickly shed the thin bodied solutions used with spray or flow-on equipment. It requires a stripper that will adhere to the surface long enough to break the paint binders.

- **Flow-on:** With this method the stripper is heated and flowed over the surface through a perforated pipe or rake. It is most efficient in an operation which is

(TURN TO PAGE 182, PLEASE)



Fleet Maintenance Superintendent Bob Kirschenbaum says, "Sound PM is the key to high equipment utilization, reliability and fewer scheduling headaches"

NEPTUNE'S SHOP PROVIDES 11 DOORS TO FAST SERVICE

NEPTUNE STORAGE'S new \$1,000,000 shop in New Rochelle, N. Y., is arranged for fast service. It's 60 ft wide and 300 ft long. Each service area has its own entrance and exit. There's no need to run a vehicle through one department to get to another. The arrangement also ties in with Neptune's moving operations so as to keep trucks maintained.

The shop starts (from bottom to top in the diagram at left) with an almost square block containing the office, parts department and machine shop. Above this are 11 doors (14 ft high, 20 ft wide) each opening into a service area. Let's look at it door-by-door . . .

1, 2, 3 & 4 Double bays are used for major and for minor repairs. Here is located a Clayton engine dynamometer for run-in and check-out of newly overhauled engines. Fleet Maintenance Superintendent Bob Kirschenbaum refers to it as his "mechanical treadmill with a cardiograph." Because he never knows exactly what road conditions a rig will find in Neptune's 48-state operation, engines get the toughest uphill, downhill and stretch testing he can devise.

5 Adjacent to the minor repair area is the wheel alignment bay. Here is a front end pit with ample recessed work space to do the job. All tools and



This three-post, 75,000-lb hoist has long and short rail superstructures spaced to accommodate varying wheelbases of tractors

Brand new \$1,000,000 service shop features separate entrances and exits to each individual service area

Neptune tractor undergoes testing on Clayton engine dynamometer after the engine has been overhauled in maintenance shop



fixtures for alignment adjustments are neatly hung around the sides of the pit.

6 Neptune's safety lane is next in line. Here are located a Bear brake tester, electronic wheel balancer and electronic headlight aimer/tester. Just ahead of the brake test platforms is a conveniently located front-end lift for making minor wheel adjustments.

7 Feature of the shop's lube lane is a 75,000-lb capacity lift. It is a Globe hoist with two 15-in. and one 10-in. lifting cylinders. Short and long rail superstructures are spaced to handle varying wheelbases of Neptune's rings. The three-post lift will not only handle tractor-trailer combinations (loaded or empty) but also straight vans and passenger cars.

Tape guides on the floor help position vehicles on the lift. Says Kirschenbaum, it is a little of a trick to get the different axles positioned right but laterally there is no problem. Special switches in the ceiling cut-off the rise of the lift if the truck's roof gets too close to the ceiling trusses. Grease guns hang vertically from self-coiling racks, are fed from overhead supplies.

8 First step for service for any truck is the wash bay. Kirschenbaum's reason is that only good

inspection can result if all dirt, old grease and oil are removed. Every 9000 miles trucks are steam cleaned, earlier if needed. Wash rack has a built-in spray with detergent valve. Trucks get clear spray, then detergent spray, then clear spray rinse. Neptune does no hand rubbing or polishing except for wheels, front and rears.

9, 10 & 11 Body repair and painting areas complete the compact shop. The paint spray booth is fully ventilated. The paint storage area is equipped with vapor-proof lighting fixtures. Contributing to the overall clean and efficient appearance of the garage are the brightly colored plumbing lines running along the ceiling for compressed air, hot and cold water, and the sprinkler system. An artesian well was installed to provide plenty of wash water should a drought restrict water use in the area. Concrete floors are covered with a bright blue, acid-resistant vynel paint.

How does this new shop tie-in with Neptune's maintenance program? Like most household goods carriers and many irregular route operators, Neptune can't set a hard and fast
(TURN TO PAGE 194, PLEASE)

**Maintenance department of Rhode Island
bus property operates well under
Transit Pars suggested goal of 18.5
man-hours per bus per month**

United Streamlines

UNITED TRANSIT'S maintenance department is operating well under the Standard Transit Pars suggested goal of 18.5 man-hours per coach per month. In fact, latest tabulations show that the Providence, R. I., bus property is operating at 15.28 man-hours per coach per month at the present time.

This 286-coach fleet is well known for its efforts to raise maintenance standards while working to meet the ATA Pars. Here are a few of the ideas it has put to work in its maintenance routines to streamline the operation while keeping coaches on the streets.

Inspections are performed
on a 1500, 3000, 6000, 15,000 and 45,000-mile basis.

3,000 MILE INSPECTION
TIMING

Item	Time
Oil	10
Water	10
TC 110	10
TC 440	10
Lubricant	10
GBC	10

3,000 MILE INSPECTION
INSPECTOR

Check Axle flange nuts, and tighten wheel nuts.
Check coolant.
Check lights and heater.
Test wipers for running proper.
Test headlights.
Check engine oil pressure.
Check engine oil level.
Check all tire valves—oil
for moisture.
Check voltage regulator.
GBC-170.
Check and adjust engine.
Lubricate idle-170.
all others idle-150.
Test and adjust foot
braking distance.

Lubricate-410, GM
Clean air cleaner
Lubricate only—
GBC only—check
Drain and

3,000 MILE INSPECTION
GREASER

Grease, drain air tank.
Blew out radiator.
Spray springs, rods, etc., under vehicle at points of wear.
Oil door tracks and door hinges with clean light engine
oil.
Special DIS Check—
Check electric thermostat front torque converter and front
springs. See Lubricate No. 11.

REPORTED TROUBLE

Water battery and check terminals. Lubricate tracks with
Molax.

ELAPSED TIME

Item	Time
A	10
B	10
C	10
D	10
E	10
F	10
G	10
H	10
I	10
J	10
K	10
L	10
M	10

WORK ACTUALLY PERFORMED

OFF JOB NO.

To save time and steps by mechanics, a tote cart is set up on the morning before the specified coach comes in for service containing all needed parts and components



Inspection Procedures



Only recently the 12,000 and 36,000-mile check has been extended to 15,000 and 45,000-mile intervals. One simple card forms the backbone of the form system used throughout the four inspections (the 1500-mile check is primarily a lube check). The form shown here is about 4¼ by 7 in. card with notations made to make it adaptable to each inspection period. Thus the back of the card used for the 3000-mile inspection has a complete breakdown of jobs for the tire man, the greaser and the inspector (illustrated at left).

The 6000-mile check utilizes a similar card with all the 3000-mile checks plus added jobs required at this time. The 15,000-mile card is similar, and the 45,000-mile card is the same, with only those jobs added

which need attention at this time. Advantage of such a form system is obvious. It's simpler to make up, easier to handle and more convenient for filing.

So as to eliminate wasted

time and unnecessary steps of the mechanics doing the job, United has set up a tote cart in which all parts and components are placed on the morning before the specified coach comes in. Then the mechanic calls at the parts room for his tote cart which has been completely loaded with each and every item he will need for the service coming up. He wheels the cart to the job and does not have to leave it until finished.

As soon as the coach pulls in, the mechanic is ready. He knows what is to be done, for he has the maintenance form before him. He has all parts at his fingertips and can reduce his job time by several minutes on every job. He doesn't have to run back to the parts room for some item he neglected to get. The parts man makes up the kit as early as two days before the job is scheduled, holds the cart in the store (TURN TO PAGE 158, PLEASE)

A tool kit, including all hand tools, power tools and special pullers and adapters needed, is made up for each job and placed on mechanic's cart when job is scheduled



Filing system assures that all mechanics know exactly how to do a job. Job description, tool needs, standard procedure for tear-down and inspection are all in file



SEAT BELTS—HELP OR HAZARD?

THERE IS growing evidence that seat belts *are* effective as a safety tool. There is at least an equal amount of evidence that most people, including fleet operators, don't think so—don't even want to try them.

When COMMERCIAL CAR JOURNAL's editors began the research for this article, most of us were in the latter group. We began by examining all of the available data. Next we drafted an article and sent it to a number of well-known safety experts. While waiting, we listened in on some of the testimony at the recent Congressional sub-committee hearings.

Most effective pro-seat belt evidence anywhere is the vast amount of data compiled by The Cornell University Committee on Transportation Safety Research. This was brought up-to-date only last month at the Congressional hearings, is summarized on the opposite page.

Based on actual accident statistics from 22 states,

it indicates that seat belts bring about an improvement in injury reduction from 60 to 87 per cent!

Best technical critic

of seat belts is A. J. White, Director of Motor Vehicle Research, Inc. He bases his criticisms on some five years of tests in which controlled, simulated accidents were studied using high speed motion pictures and both live and dummy occupants. White's main points against seat belts are . . .

- That a person held by a seat belt in a collision runs the risk of injuries he might escape if he were thrown free of the vehicle.
- That seat belts, while holding the lower part of the body in position, cause the head to act like the business end of a hammer in a collision with the possibility of causing head injuries which might not otherwise occur.
- That in some accidents, seat belts may be responsible for injuries to the abdomen.



Still controversial, they're gaining more support as a way to reduce serious injuries, but truck operators need convincing

Best summary of both arguments

came from an old friend of CCJ readers: Don Buck, now Assistant Safety Director, United States Army. Says Don . . .

"One who argues against seat belts because they occasionally contribute to death may be related to one who decries the operating table because some people do die on it. People have lost toes because of steel-toed shoes, but most wearers are protected by them . . .

"I admit that seat belts may comprise a hazard in that they may cause the head and abdomen to absorb some pretty rough treatment—however, I am convinced they tremendously lessen the probability of injury in most cases. I have them 'all around' on my family car. Curiously, they impart no sense of security, nor do they result in an increased tendency to take a chance. Uppermost in the wearer's mind is the realization that, in the event of a collision, he will 'get it in the belly' . . . The real issue is not whether seat belts are safe—but are they safer?

"One of the really significant

aspects is this: The seat belt is not a device for the high-impact speeds but for the below 40 mph speeds which characterize most survivable accidents. Seat belts will do no good where the forces induced by high speeds so deform a vehicle that its contents are crushed. But definitely they will save life and lessen injury in most instances."

Further support came

out at the Hearings in a statement by John O. Moore, Director of the Cornell Project. In it he answered three specific criticisms:

1. That seat belts caused dangerous lower torso injuries. No, says Moore. Seat belt accidents analyzed in the project showed only 0.4 per cent of seat belt users had suffered dangerous or even fatal accidents which could reasonably be attributed to the belts. Against this, among more than 15,000 non-users of seat belts in injury-producing accidents, 2.5 per cent sustained dangerous or fatal lower torso injuries.
2. That seat belts prevent escape from cars in the event of fire or submersion. Moore pointed out that analysis of more than 10,000 accident reports showed accidents of this type are extremely rare (Fire: .19 per cent; Submersion: .26 per cent).
3. That in some cases a person stands a better chance of survival if he is ejected from the car rather

(TURN TO PAGE 174, PLEASE)

Fewer Injuries with Seat Belts

Results of two Cornell clinical studies in seat belt effectiveness are shown below. In each study, accidents were divided into two matching groups with seat belt users compared to those who had no seat belts.

Study No. 1

	Without Seat Belts	With Seat Belts	
Number of cars in group	81	81	
Frequency of injury (per cent):			Improvement
All injuries	75.5	29.9	60.4%
Moderate to fatal grade only	23.0	9.2	60.0%
Dangerous to fatal grade only	3.6	1.0	Not significant

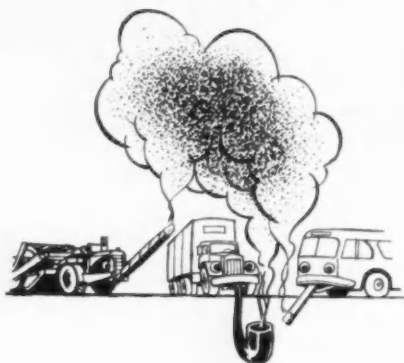
Study No. 2

	Ejectees (No Seat Belts)	Non-ejectees (Had Seat Belts)	
Number of cars in group	36	36	
Number of occupants	46	46	
Frequency of injury (per cent):			Improvement
All injuries	87.0	39.3	54.8%
Moderate to fatal grade only	53.7	10.9	79.7%
Dangerous to fatal grade only	17.4	2.2	87.4%

In the above studies, the term "All injuries" includes all injuries no matter how slight or severe. Thus, by wearing a seat belt, your chances of not being injured at all are 54 to 60 per cent better than if you don't use a seat belt.

"Moderate to fatal" injuries are those ranging from moderate injury through fatal injury. Here a seat belt has even a greater value. By wearing a seat belt, your chances of avoiding injuries in this range are 60 to 80 per cent better than an "unanchored" driver.

"Dangerous to fatal" injuries are those resulting in death or in the injured person remaining on the critical list over 24 hours. While the first study had so few in this category as to make the percentage result insignificant (the odds would be better than 2 to 1 in favor of the seat belt wearer), the second study shows the seat belt wearer 87 per cent better off than the non-seat belt user.



In A Diesel

Too Much Smoke Means

... it probably means too much fuel, not enough air,

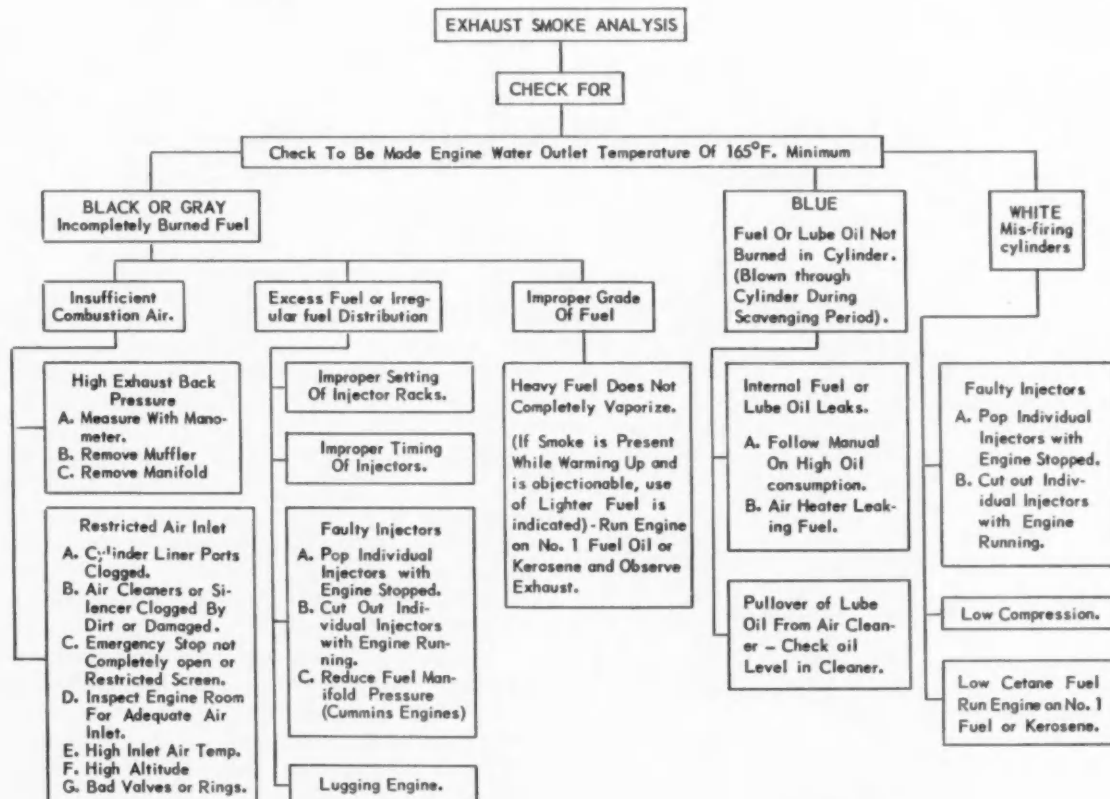
▼ A GREAT CLOUD of thick smoke pouring from a diesel-powered vehicle doesn't necessarily mean that a hurried call should be placed to the nearest fire department. More than likely it is an indication that the nearest mechanic should be quickly summoned to build a better fire in the cylinders of the vehicle's engine. Excessive engine smoking results from incomplete combustion of fuel in the engine's cylinders.

Like any combustion problem, excessive smoking can be traced to one of three basic causes—too much fuel, not enough air, too low a temperature. They usually turn up in combination, however, due to incorrect vehicle operation, use of the wrong fuel or

poor maintenance. Because it indicates inefficient operation, soon leads to lost power, and shortens the useful life of the engine, excessive smoking should be investigated and corrected without delay.

An attempt to increase

an engine's power beyond its capacity, to compensate for overloading, by over-fueling the engine generally results in excessive smoking. An increase in the amount of fuel injected will (1) increase the speed of an engine if its load remains unchanged, (2) maintain the same engine speed if the load is increased, or both, depending upon the amount of fuel injected



By R. J. Lenz, Manager, Service Dept.
Euclid Division, General Motors Corp.

Too Little Fire

or too low an operating temperature

and the load. Engine speed and power can be increased in this manner up to the maximum limits determined by the design of the engine. When more fuel is injected into the engine's cylinders than can be completely burned, the unburned or partly burned fuel will be blown through the exhaust stack as smoke.

With the unit injector

system as used on GM engines, fuel is metered and injected into the cylinders by the injectors. When the load on the engine demands more power than the engine can deliver at the speed at which it is turning, the operator may increase the amount of fuel being injected by opening the throttle further.

Should the load be too great to permit the engine to increase its speed, the slower turning air blower cannot supply sufficient air to the cylinders to completely burn this additional fuel. Thus, partly burned fuel in the form of smoke will be blown out of the exhaust stack. This condition can only be remedied by decreasing the drag on the engine so that the correct charge of fuel will supply the necessary power. This can only be accomplished by downshifting the transmission to a lower gear ratio to allow the engine to operate at higher speed. Thus vehicle speed must be sacrificed to gain the additional engine power needed to move the increased load.

In the Cummins P. T. fuel

system, fuel is metered by both the fuel pump and injectors. The amount of fuel injected depends upon the fuel pressure delivered by the pump to the injectors and the length of time that the fuel metering orifices in the injectors remain open. Both these variables are controlled directly by engine speed. Thus the correct fuel charge will be delivered to the cylinders and the engine will not smoke as long as the fuel pump pressure setting and the injector timing remain in adjustment.

However, should these critical settings change, or be altered purposely in an attempt to increase the engine's power output beyond its capacity, the air-fuel ratio in the engine will be changed, an excess of fuel will be delivered to the cylinders, and the engine will smoke. Therefore, care must be taken to maintain the correct fuel pump pressure setting and injec-

tor timing on Cummins engines if excessive smoking of these engines is to be prevented.

The altitude at which an

engine is operated may also be responsible for engine smoking. At high altitudes, air contains less oxygen by weight than the air at sea level. Thus, the engine cannot burn the same amount of fuel per stroke as it can at sea level and the engine will smoke. In order to eliminate this high-altitude smoking, smaller injectors must be installed in GM engines or the fuel pump pressure setting and injector timing in Cummins engines must be readjusted so that less fuel will be injected into the engine's cylinders.

Engine smoking at high altitudes is not normally a problem with turbo-charged diesel engines because the turbocharger supplies an excess of air to the engine. This over-abundance of air will usually contain sufficient oxygen for the complete combustion of a regular charge of fuel even at high altitudes.

The type and condition of

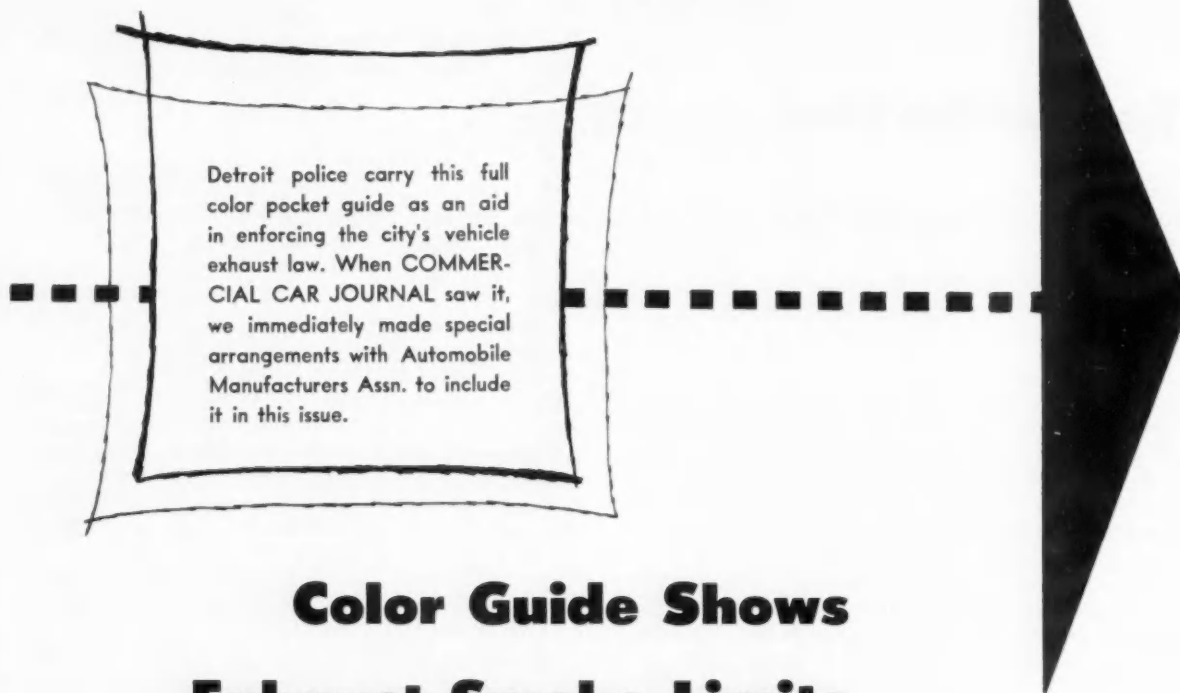
diesel fuel used has a direct bearing on engine smoking. If the fuel is not of the correct viscosity, it will not atomize properly when injected into the cylinder. The fuel spray will thus not mix correctly with the air in the cylinder and will cause incomplete combustion and engine smoking. The ignition quality—or cetane rating—of the fuel also affects engine smoking. Fuels with a low cetane rating do not ignite quickly and take longer to burn completely. This late-burning fuel will, therefore, not be completely burned when the exhaust valves open and thus cause engine smoking.

Diesel fuel may also contribute to engine smoking by causing the close-fitting injector parts to stick. The clearances between these parts are extremely close. If the fuels used do not adequately lubricate them, they may overheat, expand, and stick, resulting in erratic injection, misfiring and excessive smoking. Dirt, water, or any corrosive substance in the fuel will also cause engine smoking for the same reason.

Poor mechanical condition

of the engine cannot be corrected by correct operating procedures or proper fuel. Faulty fuel systems may permit overfueling of the engine. Incorrect servicing of the engine can result in excessive lubricating oil being drawn into the cylinders. Defective air systems will restrict an adequate supply of air to the cylinders to support complete combustion of the fuel. Worn injectors will allow fuel to leak past check valves and

(TURN TO PAGE 142, PLEASE)



Detroit police carry this full color pocket guide as an aid in enforcing the city's vehicle exhaust law. When COMMERCIAL CAR JOURNAL saw it, we immediately made special arrangements with Automobile Manufacturers Assn. to include it in this issue.

Color Guide Shows Exhaust Smoke Limits

Automobile Manufacturers Assn. develops chart for quick checking of smoking trucks and buses

V MANY CITIES ARE concerned about what seems to be excessive vehicle exhaust. So-called "anti-exhaust" laws are being debated in city councils.

At this stage of the game, these proposals can be divided into two types. Those that can be met with a properly adjusted engine and a sound exhaust system are, so far, the most common. Second type are those arising in areas—such as Los Angeles, Cal.—where smog is a real problem.

One problem common to both that has stymied enforcement of exhaust laws is a standard by which to measure "excessive" exhaust emission. However, Detroit working with the Automobile Manufacturers Assn., seems to have come up with a workable solution. Since your city fathers soon will be hearing about it—and considering its adoption—you'll want to know the facts.

A year ago in April, Detroit passed an ordinance reading . . .

"No person, firm or Corporation shall operate or cause to be operated upon any street, highway, or other public place a motor vehicle, while stationary or moving, which emits from any source any unreasonable, excessive, or unnecessary smoke, obnoxious or noxious gases, or vapor."

This law was developed by the Detroit Smoke Abatement Bureau, the Detroit Police Dept., the Detroit City Counsel's office and a special Automobile Manufacturers Assn. committee. Included on this committee were representatives of Chrysler Corp., Cummins Diesel Michigan, Inc., Detroit Diesel Division (General Motors), Ford Motor Co., General Motors Corp., GMC Truck and Coach Division (General Motors), Mack Trucks, Inc.

The group sifted the available material, finally decided that police officers could be instructed in what was permissible exhaust through (1) a special course centered about a full color training film, and

(TURN TO PAGE 166, PLEASE)

MOTOR VEHICLE EXHAUST SMOKE GUIDE

Purpose

This pamphlet is intended as a guide in recognizing unnecessary exhaust smoke conditions.

How to use

The photographs show typical unnecessary emissions from the various classes of vehicles: black smoke from vehicles with diesel engines and blue-white smoke from vehicles with gasoline engines.

Identify the class of vehicle. Then by referring to the exhaust smoke picture for this type of vehicle, determine whether the degree of emission is equal to, greater or less than shown. If the degree of smoke is equal to or greater than shown, the emission is considered unnecessary.

(For misleading conditions see back page)



GASOLINE COACH



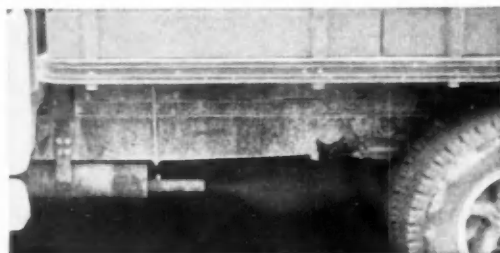
DIESEL COACH



AUTOMOBILE



DIESEL TRUCK—HORIZONTAL EXHAUST



GASOLINE TRUCK



DIESEL TRUCK—VERTICAL EXHAUST

MISLEADING CONDITIONS

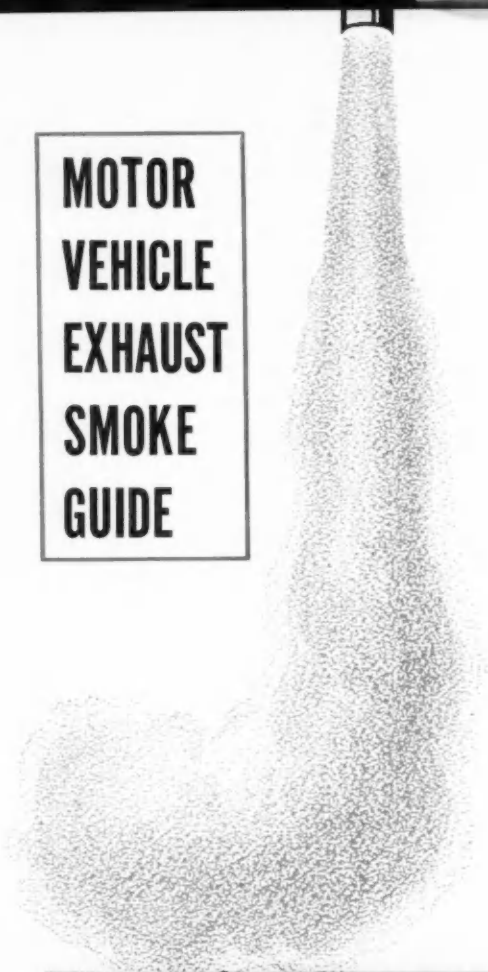
Emissions similar to those shown as unnecessary can sometimes be considered as reasonable if associated with the following conditions:

Condensing water vapor can be mistaken for smoke during cold weather or engine warm up. With experience, water vapor can be distinguished by its whiter color and usual rapid disappearance. Diesel engines will emit smoke heavier than shown during warm up periods. This cannot be avoided.

Visible emissions of short duration, in excess of those shown, may occur during periods of acceleration, gear shifting and deceleration. If these emissions continue through the acceleration or deceleration period, they should be considered as unnecessary.

Dust clouds formed at the rear of a moving vehicle are readily distinguished from exhaust smoke by the color and consistency of the cloud.

MOTOR VEHICLE EXHAUST SMOKE GUIDE



Prepared by the Automotive Industry
as a public service in cooperation with
Detroit Department of Buildings
and Safety Engineering,
Smoke Abatement Bureau,
and Detroit Police Department

Copyright, Automobile Manufacturers Association June 1957

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CCJ CONSTRUCTION FLEET MAINTENANCE



Compiled by the Editors of COMMERCIAL CAR JOURNAL

Exhaust systems on construction

equipment are subjected to a great deal of abuse—from man, the elements, immovable objects. And surprisingly enough, the man who insists upon an efficient, tight system on his truck or passenger car, often lowers his maintenance standards when he inspects the muffler and exhaust pipe on off-road equipment. True there's not so much danger from CO₂ from overhead stacks on open cabs—but back pressures caused from deterioration and obstructions can reduce horsepower and performance. Check exhaust back pressures and check manufacturers' manuals for limits when you tune up equipment.

Every mechanic knows how to

adjust valves and injectors on diesel engines. But sometimes the very simplicity of the operation misleads him into failure to take the pains he ought to. In the interest of good performance these adjustments must be precise. Cold engine valve clearance is determined by engine design characteristics and expected operating temperatures. A few thousandths of an inch off manufacturers' recommendations will reduce engine efficiency.

You can't get a good reading if stems are worn, if rocker level rollers and pins interfere with gaging. Be sure too that the crankshaft is in the proper position when taking readings. Another precaution—always make final valve adjustments after the injectors are adjusted, and with the engine warm. The oil temperature should be at 140° F. Just one more suggestion—be sure to read the clearances in the manuals correctly . . .

Proper tire inflation is

old hat to equipment superintendents. Yet periodically we find evidence of someone's failure to check them. Tire companies are going to be pretty suspicious if they find evidence of over inflation or under inflation—and the story is told right on the tread. Attempts to compensate for overloading by increasing the tire pressure generally result in cord breaks. You may get

by for a while, but eventually you'll strike a rock or a curb—and you've got a failure. Underinflation causes excessive heat from too much flexing and results in premature wear or complete blowouts.

Ever think of utilizing some

of the slower periods in the maintenance department by giving your mechanics some extra training? Several construction fleets have—and they report that the extra costs are one of the best investments in time and money they ever made. You can take advantage of manufacturers' facilities. They will provide manuals, classroom mock-ups and handy training aids to expedite the instruction. Sometimes they provide instructors.

Sure, you master mechanics know your business. But what about your assistants and helpers? Have your field men been "exposed" to the inner workings of some of these new components? Even an extra hour a week devoted to "brushing up" on engineering and maintenance might speed up diagnosis and repair when your equipment needs quick attention in the field.

The man who chooses a pair

of shoes to fit his feet is not always as careful in selecting equipment to do the job. The other day we came across a contractor who had converted a 5-ton roller to an 8-ton—with the same power plant. And then he cursed because the engine had to be overhauled every year. Do your engines "fit" as comfortably as your TV slippers?

If you're getting ready to store

some of your equipment for the slower winter months, remember the battery. Best to remove them if the equipment is to be laid up for more than two weeks. They should be stored in a cool dry place and checked periodically as discharge will occur at an average rate of 0.002 Sp. Gr. per day at 80° F. Remember too, when you add water during winter months, to run the engine a while to thoroughly mix the electrolyte.



By J. B. Sinclair, Service Dept.
Caterpillar Tractor Co.

V CABLE IS AN expendable item which must be replaced frequently. However, many dollars can be saved by giving cable proper care and maintenance. Here's what happens inside a cable as it bends when passing over a sheave and then straightens out while moving to the next sheave . . .

Individual wires are preformed in what might be thought of as a long spiral and twisted together into strands. The strands are twisted together into a rope. This construction permits great flexibility without excessive "stretchiness" and minimizes friction between wires as the cable bends and straightens. In operation, a cable is a group of closely fitted moving parts.

Cable, like any other part of a machine, requires reasonable care. Its service life can be shortened by abuse or lengthened by proper use and maintenance.

It's not at all uncommon to see a reel of cable rolled over an obstacle with the cable taking the brunt of the shock, or to see a pry bar being used to move a

reel of cable. Whenever this occurs, some of the life is taken out of the cable before it's ever put to use.

Sharp bends or kinks in a cable are very frequently the cause of rapid wear. When bent or kinked, the wires and strands are moved out of their relative positions and unequal tensions are created on individual wires.

Kinks are caused by careless handling of the cable either on or off of the machine. When unreeling or uncoiling cable from a reel, pull the cable straight away from a rotating reel. Do not let the reel rotate faster than the cable is being removed as the danger of kinking increases considerably.

When cable is removed from a reel which does not rotate, uncoil the length of cable required, placing one coil on top of the other.

Always be sure to use the correct cable size. Weld or otherwise bind the end of the strands of cable together. In this way, the strands are held in their relative positions and cable wear will not be excessive because of loose, high strands which have moved out of position. The strands of the cutoff end of the reel should also be secured and the end of the cable secured to the reel. Do not drive nails through the cable to secure it to the reel as wires can be damaged or broken.

When installing new cable, assemble the cable on the drum in the direction of the natural coils. If installed correctly the cable will have a greater tendency to reel onto the drum in a smooth layer.

Proper lubrication of cables will extend cable life, promote safety and reduce downtime. Frequency of cable lubrication de-

pends largely on operating conditions. If operating in dusty conditions, the cable should be lubricated sparingly, if at all, since dust will adhere to lubricant and cause wear on both cable and sheaves. Cable lubrication is recommended in areas where atmospheric conditions support rust and corrosion. Here, a film of lubricant will definitely extend cable life.

To prevent rusting, cable lubricants should be water resistant, contain no acids or alkalis and have a high surface tension. Each time a cable is flexed, the wires in each strand and the strands which make up the cable must slide over each other. For this reason, a penetrating, clinging lubricant of high melting point such as "crater compounds"—used for open gears and cables on shovels or cranes—should be used.

In the event of an extended or seasonal shutdown, the cable should be cleaned and well lubricated. Sheaves and rollers should always be kept clean and well lubricated to facilitate free turning, and minimize sliding wear.

Operation and maintenance of cable-controlled equipment determines, to a large extent, the life of a cable. Misaligned sheaves, bad sheave grooves and frozen (non-rotating) sheaves can reduce cable life by causing burning and eventually fraying. Whenever there is excessive friction between the cable and the other parts of a machine, burning usually results. Burned cable soon becomes brittle and cracks. Cracked wires soon lead to frayed strands and a weak spot in the cable.

The useful life of cable can also be reduced by operating over sheaves that shimmy. Shimmy is caused by worn sheave bearings and results in rope vibration which causes steel fatigue.



The City of Madison (Wis.) overhauled vehicles in the shop yard after work is completed. After the periodic check-up, operators know their equipment is ready for the day's work. Installed in 1954, the systematic PM program has resulted in a saving of 0.9 cents per mile.

Operating costs ran 5.3 cents per mile before the PM system was initiated. Now they are running at a cost of 4.4 cents. With each vehicle traveling an average of 3000 miles a month, the yearly saving amounts to \$324 per vehicle per year—or a total fleet savings of \$8748.

Engine Oil Checks Spot Service Needs

PURE OIL'S Used Oil Analysis Plan is two-fold in scope, consisting of a "lab check" and a "spot check." More than a dozen checks are made on every used oil sample. Then, an automotive engineer is assigned to the interpretation of the results of your sample to detect hidden engine troubles.

The lab check of used oils tells you of the general mechanical condition of your engines, gives a check on how your PM System is working.

The following are analyzed and recommendations made when necessary: change in oil viscosity, fuel dilution, solids in oil, tars and asphaltic materials, gums, insolubles, fuel lead, fuel soot, carbon in oil, metal or dirt, and water.

The lab check reveals conditions that reduce engine life, cause premature failures and result in road calls and unscheduled downtime.

Pure's spot check enables you to tell how dirty your crankcase oil is—in just two minutes. It es-

tablishes the maximum safe drain period for each of your fleet units. And it protects your engines from damage by letting you know when crankcase oil can no longer be used without risk. Comparisons of spots from the same engine over a period of time give warn-

Breakdown insurance—Here's one of the simplest, inexpensive ways of keeping equipment on the job—take your lubrication to the job site. Portable systems like this Lincoln Lubri-van not only save time but just about

ing of trouble-making conditions that may cause expensive repairs. It's as easy to use as a dipstick is to read.

The spot check tells you when to drain the oil, will indicate sudden changes in engine condition that would cause breakdown if not corrected, will show up leakage from the cooling system before engine parts are ruined.

eliminate the possibility of omitting a busy rig. Another prerequisite, to proper lubrication—use trained men who know what they're doing. A "grease monkey" is the most expensive employee in your business.





Contractors'

Besides keeping all of the varied equipment

Relatively inexpensive farm tractor was adapted for a rock drill by Reno Construction Co., Olathe, Kan. The air compressor which powers the rock drill can be towed by the tractor



Reno Construction Co. also makes use of the above shop-built trailer to carry the power plant for its secondary rock crusher. The trailer was built so the whole portable operation could be set up in sequence more quickly at the construction site (right)



Shops Solve Problems

in top shape, maintenance men often come up with some unique time-saving ideas

Crews of a Kansas City, Mo., firm mounted a rotary blast hold drill on a track and frame from which the engine was removed. A 2-cycle diesel supplies necessary power



CONTRACTORS' shops are called upon to do two jobs. There is the daily routine of keeping all the varied equipment serviced and repaired . . . not a glamorous job but an essential one.

But every now and then, a hurry call comes into the shop for some special piece of equipment to solve a problem . . . a problem that is probably costing many dollars in lost time.

For example, moving a

Cedar Rapids portable rock crusher meant time lost in setting-up its power plants at a new site for Reno Construction Co., Olathe, Kan. Solution to the problem came from Reno's base shop.

The maintenance crew built a trailer on which to mount the power (two GM 6-71 diesels) for the secondary crusher. Now the two trailer-mounted 6-71's are twinned through an Allison torque converter with single-shaft drive to the secondary.

Trailer frame is of welded

steel channel with rear dual wheels supporting the bulk of the weight of two engines. The frame is offset with a welded step-plate steel fuel tank at the front on the higher elevation of the front half of the frame. This permits use of a straight axle for the front wheels with a king pin in the center. Towing tongue is made for hooking on to truck or tractor and front wheels can be cut under the frame for short radius turns.

Exhaust stacks from the engines are piped some five or six feet above the engine, and two air intakes are piped a little above the exhaust outlets. This gives the engines a better chance to obtain air lower in lime content than that found at lower points.

A farm tractor-mounted drill

is another problem solution from Reno's base shop. It is a Gardner-Denver rock drill mounted on a comparatively inexpensive Ford farm tractor. The drill is mounted on a Joy frame and the frame adapted to the rear of the tractor.

(TURN TO PAGE C6, PLEASE)



List & Clark tractor, below, has blade four feet wider than normal. It is used for cleaning up rock spill to save tires of other equipment

Contractors' Shops . . .

Continued from Page C5

Mechanical crews of

List & Clark, Kansas City, Mo., are continually called upon for mechanical revisions or development of more efficient combinations in addition to regular maintenance work. One of their contributions to the higher efficiency was the mounting of a Joy No. 225 rotary blast hole drill on a D8 Caterpillar track and frame from which the engine had been removed.

A GM 4-71, 2-cycle engine was mounted on a platform in front of the tractor where it was readily accessible for servicing. This small engine powers the rotary drilling mechanism, the hydraulic pump, the dust blower, supplies power for feed and vertical movement of the stem and motive power for the tracks. One operator in a comfortable seat at the rear has all the controls at his hand. A foot gage above him shows depth of hole, a trailing chain in the rear measures the distance to the next hole—all without leaving his seat.

A tire-saving, extra-wide dozer

blade also came from List & Clark's shops. The blade on an Allis-Chalmers tractor was made about four feet wider by welding. The unit now does a faster job of cleaning up the rock spill where big shovels load big dumps with rock and shale for the big dam.

The big tires used in construction cost real money and haul roads and travel areas must be kept clean. Since this tractor was assigned to clean up after two shovels and a dragline occupied with loading blast rock, the wider blade made it possible to keep the area clean with fewer passes.

Compaction rollers haul fuel

for Mid-State Paving Co. A. E. Webb, general superintendent for the Meridian, Miss., firm, figured out that his rubber-tired compaction rollers might as well be carrying fuel as water for ballast. He eliminated four troublesome, 285-gal fuel skid tanks which had to be filled every day. He also saved dead-heading a needed tractor several times a day for handling the skid tanks.

Four 15-wheel Grace compaction rollers with water ballast tanks were revised in the Mid-State shops to carry fuel. The tanks were equipped with a calibrated stick for checking fuel quantity, a filler plug and a hand-operated pump to be used for refueling other vehicles. The tanks were also equipped with three baffles to prevent load shifting.

These tanks hold 440-gal

each and require filling but every two days. They are always on the job near other rolling equipment so refueling is quick and easy. Two of these fuel-carrying compaction rollers have been assigned to each of the two complete paving spreads operated by Mid-State.

Equipment Design Needs Serviceability

F. A. GROOS, of Caterpillar Tractor Co., gave the earthmoving industry some interesting pointers on equipment design. He prepared a paper for the SAE Central Illinois Earthmoving Conference recently and outlined several needed improvements for future construction equipment. He said that much remains to be done to make earthmoving equipment servicing easier and more effective.

Take greasing, for example. Grease fittings call for service every 10 hr, every 20 hr, and servicing every 100 hr. This makes for confusion. One tractor-scraper manufacturer specifies greasing the scraper every 10 hr and similar fittings on the tractor every 20 hr. As a result, everything or nothing gets lubricated.

Why not establish common

service periods? The fittings have been pretty well standardized as to size. Now we need to reduce their number, make them more accessible, and extend service periods by providing better sealing and greater reservoir capacity.

Dirt clearance should be provided around reservoir breathers, dip stick holes and filler pipes. Filler caps and dip stick caps need deep skirts to keep necks clean and prevent dirt from entering while servicing. Filler caps and covers with keepers would prevent misplacement and loss.

Dip sticks, filler necks, and

breathers should be located where they are easily seen. Dip sticks which are easily reached, legible and accurate are better and safer than level plugs. Drain plugs shouldn't drench the service man when removed, yet drain the compartment adequately.

Filters should be placed in accessible locations. Compartments ought to be combined to reduce the number of filters, and the number of types and sizes of filter elements needs reduction. Along with this should go a limit on number and types of oils and greases.

Oil and air lines should

be neither all flexible nor all rigid. Flexible lines are difficult to support. Rigid lines are hard to assemble and subject to breakage. Rigid lines for fixed locations and flexible sections for relative movement and ease of coupling seems to be the best compromise.

Service can be eased by using pilots for locating units, chamfers for guiding, puller holes and slots for part removal, and stepped or tapered shafts for ease of assembly and disassembly. Parts should be designed so that they can be assembled only in one particular manner and location. That would prevent bevel gears from being assembled backward and axle shafts of unequal length from being assembled incorrectly.

What's New...

Euclid will hold service classes in Atlanta, Ga., beginning Sept. 30, continuing until Dec. 13 to accommodate all Euclid owners in the southeastern states. Classes will be held in trouble shooting, maintenance and repair at the General Motors Training Center, 281 Mt. Zion Rd. Your local Euclid dealer has the details.

International Harvester has established a pool of dump trucks to help contractors meet immediate or emergency needs. Models available with factory-installed dump bodies range up to 33,000 lb GVW, are located at International's Springfield, Ohio, and Fort Wayne, Ind., works. The pool enables road contractors to purchase full-equipped, ready-to-roll dump trucks that can be delivered on a few days' notice, thus avoid delay caused by equipment shortage. Four and 6-wheel models in conventional and cab-forward design are offered. Dump body capacity ranges from 4 to 8 cu yd.

"Friction Facts" is a new booklet answering questions about clutch facings and brake linings. It's offered by Caterpillar Tractor Co., Peoria, Ill. (Ask for Form No. DE747.) Loss of friction, glazing and chipping, wear and torque capacity are discussed.

Goodyear Tire & Rubber Co. is conducting a series of rim education schools to show latest techniques in servicing large earthmover tires and rims. The program centers around tubeless assemblies. Schools are now operating in the east,

Ernest Holmes Co., Chattanooga, Tenn., offers a new series of three dump truck loaders, says they can be installed on most any 2, 2½ or 3-ton truck, either conventional or COE. The ¾-yd loading bucket can be equipped with a forward tipping action, permits loading other trucks as well as the one to which it is attached. Says Holmes, the forward and upward action of the bucket permits loading from a standstill without depending on the traction of the truck.



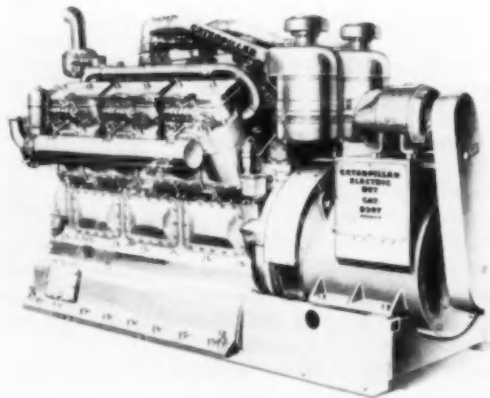
Chevrolet's 1958 line includes this 4-wheel drive, 145-hp pick-up. In all, Chevrolet is offering 12 4-wheel drive models in addition to a full line of conventional models. For complete details, see page 88, this issue.

central and western states. Sponsored by local Good-year distributors, they are conducted by factory rim engineers.

Industrial tire manual from B. F. Goodrich, Akron, Ohio, is a 36-page illustrated guide book that explains all phases of their use. Written for maintenance superintendents, industrial engineers and purchasing agents, it is available without charge.

In addition to specifications for all types of industrial tires, the book describes (1) the complete B. F. Goodrich line in detail, (2) use of each type of industrial tire, (3) variations in pneumatic tire capacities at various speeds, (4) wheel and caster combinations.

Caterpillar Tractor Co., Peoria, Ill., announces a new spark-ignition electric set. Available with either Caterpillar's SRCV generator or an optional 2-bearing generator, the new set is rated at 250 KW. Power is provided by a V-type D397 diesel engine which can be altered to operate on methane, butane, propane or field gases. Output is 60 cycle, 3-phase current.



FACTORY SERVICE

Caterpillar Tractor Co. says reduction of engine horsepower at high altitudes can be eliminated on the Model No. D8 tractor through use of a normalizing kit. The new kit consists of a turbocharger and all manifolds and adaptors needed to mount it on the tractor engine, overcomes the cause of high-altitude power loss—insufficient oxygen to permit complete combustion of fuel. The turbocharger delivers air to the inlet manifold at greater than atmospheric pressure, permitting complete fuel combustion and restoring "sea level" horsepower up to 10,000 ft altitude. For example, when operating at an altitude of 8000 ft, the normalized D8 will operate at the machine's sea level rating of 191 hp, while the standard D8's capacity at the same altitude would be 151 hp.

Cummins diesels will run on a variety of fuels, but some fuels will give better performance and a higher degree of reliability with lower maintenance cost than others. Fuel choice should be made on the basis of overall economy rather than price per gallon. Mineral type acids, sometimes found in low grades, may be highly corrosive to fuel pump and injector parts. Dilution of the lubricating oil by such fuel may cause extensive damage to engine bearings. Heavy residue is the principal cause of excessive deposits on injectors, in the combustion chamber and in the exhaust ports. Plugged injector spray holes, stuck valves and piston rings are common results of these deposits.

Fuel must have good lubricating qualities because injector and fuel pump parts are fuel lubricated. Fuels with a viscosity lower than 34 Saybolt at 100°F., or 2.4 Centisokes, are generally lacking in lubricating qualities. Pour point must be at least 10 degrees lower than the lowest anticipated temperatures. Fuel used in Cummins engines should contain no more than one per cent sulphur as an insurance against the formation of sulphuric acid. Fuels with high cetane number and high BTU content give better results than the so-called economy fuels.

Euclid notes that when mechanical failure occurs between the moving parts of the components of an hydraulic system, the hydraulic fluid will carry any metallic particles broken loose through the entire system until they become lodged either in a filter or in some other component of the system. Therefore, when such a failure occurs, the entire hydraulic system and its components should be thoroughly cleaned to remove any loose particles before the equipment is returned to service. Hydraulic components that cannot be adequately cleaned should be replaced to prevent any additional damage when they are again placed in operation.

The oil cooler elements installed on Allison transmissions cannot be thoroughly cleaned. For this rea-

son it is important that these elements be replaced after a mechanical failure in an Allison transmission or converter. Replacing these oil-cooler elements will prevent any abrasive particles trapped in the element from being carried to the transmission or converter and causing additional damage.

The Euclid TC-12 transmission must be shifted correctly to insure maximum transmission and converter life and to promote peak operating efficiency of the unit. Some operators "pump" the forward-and-reverse transmission levers when shifting to make a slow turn. If these levers are not fully engaged, the transmission control valves cannot supply sufficient oil pressure for the proper operation of the forward and reverse clutch packs, the high, intermediate, and low clutch packs, and the converter.

Partial engagement of the forward and reverse transmission levers will allow slippage in the clutch packs. This slippage generates excessive heat which will warp and score the plates in these packs. Crawler operators should be informed of this danger. If a slow, even turn is desired, the transmission shift levers should be completely engaged and the tractor's speed and power regulated with the throttles and range selector.

Pure Oil Co. is marketing a grease in 14-oz cartridges for convenient lubricating of heavy-duty construction equipment. This MS grease replaces all single purpose greases. The lithium soap base provides complete protection against water. Impact resistance qualities are said to resist shock loads and high impact. The lubricant resists melting temperature up to 390°F. A special "Load-a-matic" grease gun has been designed for these cartridges.



INDEX TO OTHER ARTICLES

Interested in a shop where one piece of equipment doesn't get stuck behind another?.....page 76

Just as a doctor checks a patient's pulse, a good maintenance man checks the exhaust.....page 82

In this fleet of specialized equipment, time — not mileage — sets the maintenance pace.....page 92



This sign says...

**“WELCOME, TRUCKERS, TO
THE BEST STOPS ON THE ROAD!”**

★ THE FINEST TRUCK STATION FACILITIES
AVAILABLE ANYWHERE ON THE ROAD

★ THE MOST COMPLETE LINE OF TOP-
NOTCH TRUCK-TESTED PRODUCTS DE-
SIGNER SPECIFICALLY FOR TRUCKS

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Directory.

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Styling of Chevrolet's "Spartan" low cab forward heavy-duty tractor includes standard dual headlamps, is typical example of '58 styling

Step-Van, complete forward-control delivery units in light duty series are offered in wheelbases of 104, 125 and 137 in. to accommodate 8, 10 and 12 ft bodies. GVW range is 5600 to 10,000 lb



CHEVROLET FOR 1958 offers 128 models, 24 different wheel bases and five basic engines. Here's a quick run-down of what's new in the line . . .

- New styling . . .
- New 348-cu in. V-8 engine . . .
- A dozen new models . . .
- New series numbering system . . .
- Dual headlamps . . .
- A light duty version of the 283-cu in. engine . . .
- Improved engine fans . . .
- Optional front axle drive on 4-wheel drive models.

Styling changes can be seen in the pictures on these pages. As expected, dual, 5 $\frac{3}{4}$ -in. headlamps are standard on all models.

New series designation consists of two numbers—31, 32, 36 and 38 for light duty models; 40, 50 and 60 for medium duty models; 70, 80, 90 and 100 for heavy duty models. Individual models have a four number designation. For example, a new model in the medium duty line with 19,500-

lb GVW rating is designated as Model No. 6703H.

The new models include (1) six 2-ton low-cab-forward and chassis models with a 72-in. cab-to-axle dimension, advantageous for certain trailer operations, (2) three cab-chassis models in the 60 series with 124-in. cab-to-axle dimension to permit bodies 16 to 19 ft in length, and (3) three forward control chassis with 8, 10 or 12-ft van-type bodies on 104, 125 and 137-in. wheelbases.

Cargo space in these new vans is 276.45, 334.21 and 392.1 cu ft, respectively. GVW ratings are from 5600 to 10,000 lb, depending on tire, spring, and axle options.

The 348-cu in. "Workmaster"

engine—rated at 335 lb ft of torque at 2800 rpm, 230 bhp at 4400 rpm—is entirely new. With the exception of some minor items, its components are not interchangeable with either the 283 or the 322-cu in. V-8 engines. (Engine specifications are condensed in the table at right.)

New 348-cu in. "Workmaster" V-8 offers 335 lb
ft of torque at 2800 rpm and "pointed pistons"

1 New Engine for 1958

Chief among the design features of this engine are a new cylinder block and head. The complete combustion chamber is located wholly within the cylinder bore. Top face of the block is machined at a 74° angle to the centerline of the bore instead of the conventional 90°, inclining the head more toward the horizontal. Thus the top of the cylinder is elliptical rather than round, making more space for larger valves, central location of the spark plug and staggered valve arrangement.

"Peaked roof"

aluminum pistons are positioned with one dome surface parallel to the plane of the flat head and the other at a 32° angle to it. The result is a thin squish and quench area in one half the cylinder and a wedge-shaped combustion chamber in the other. The arrangement is said to (1) induce extreme turbulence in the fuel-air mixture and (2) together with the short flame travel from the centrally located spark plug, induce high efficiency of combustion.

Exhaust valves are sodium-cooled, Stellite-faced, are used with replaceable Silchrome valve seat inserts in the cylinder heads. They are equipped with valve rotators of "Rotocoil" design. Intake valves are aluminum coated.

Camshaft drive

is by means of a roller chain. Valve springs are equipped with dampers and hydraulic valve lifters are standard. Pressed steel rocker arms are mounted on individual studs, while pushrods are hollow to provide for lubrication.

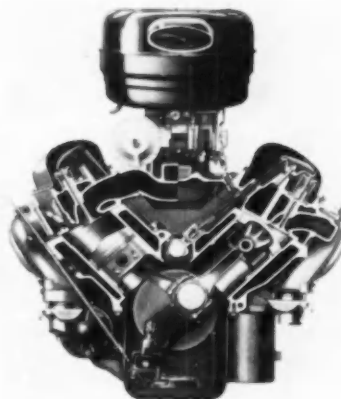
Crankshaft crankpins and main journals are induction-hardened. Crankshaft overlap is 0.724 in. for greater strength and rigidity. Main and con rod bearings are of premium heavy duty Moraine 400.

The 232-cu in.

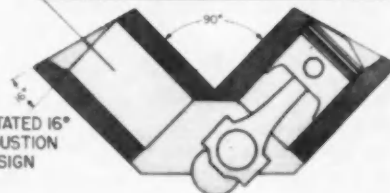
6-cyl engine will have a higher rating incident to an increase in compression ratio. Oil to the rocker shaft now is supplied through a drilled hole in the block, eliminating external oil supply pipe.

New oil control rings with stainless steel separators
(TURN TO PAGE 130, PLEASE)

Schematic drawings of the engine block geometry show elliptical opening at top of bore (below) and pointed piston arrangement to form wedge-shaped combustion chamber (right) in new 348-cu in. "Workmaster"



LARGER VALVES STAGGERED
TO TAKE ADVANTAGE OF ELLIPTICAL OPENING



BLOCK FACE ROTATED 16°
FOR NEW COMBUSTION
CHAMBER DESIGN

Chevrolet 1958 Engine Specifications

Model No.	235	261	283	322	348
Cyl.	6	6	V-8	V-8	V-8
Bore (in.)	3 ⁹ / ₁₆	3 ³ / ₄	3 ⁷ / ₈	4	4 ¹ / ₈
Stroke (in.)	3 ¹⁵ / ₁₆	3 ¹⁵ / ₁₆	3	3 ³ / ₁₆	3 ¹ / ₄
Disp. (cu in.)	235 5	261	283	322	348
Comp. Ratio	8.25:1	8:1	8:1 ⁴	7.7:1	8:1
Bhp (max.)	145@4200	150@4000	160@4200 ⁵	195@4000	230@4400
Torque (max. lb ft)	215@2000	235@2000	270@2000 ⁵	310@2200	335@2800
Carburetor	1 bbl ¹	1 bbl ¹	2 bbl ²	2 bbl	4 bbl
Available on Series Standard	30, 40	60	50, 70 ⁷ , 80 ⁷	100 ³	90, 100
Regular Production Option			30 ⁶ , 40 ⁶ , 50 ⁶ , 60 ⁶		

¹ Series 30 forward control and parcel delivery models have updraft carburetor.
² Except forward control and parcel delivery models. ³ School bus models only.
⁴ Light duty version has 8.5:1 ratio. ⁵ Heavy duty version with 4 bbl carburetor is rated at 175 bhp @ 4400 rpm, 275 lb ft torque @ 2400 rpm. ⁶ Light duty version with 2 bbl carburetor (except Series 30 forward control and parcel delivery models). ⁷ Heavy duty version with 4 bbl carburetor. ⁸ Heavy duty versions with either 2 or 4 bbl carburetor (except forward control and parcel delivery models).



Congress Left Much for January

While many bills flounder in committee pigeonholes, a number of importance to the nation's fleets got through both the House and Senate to become laws

By Ray M. Stroupe
Washington News Editor

V MOST OF THE transportation bills offered in Congress this year remain in the committees which originally received them.

The majority of these measures received no handling other than discussion in public hearings. Some of them were simply bypassed while the lawmakers gave their attention to other bills. But a number of importance to motor carriers got through both the Senate and House and have since become law. The others remain alive for action and possible passage in 1958.

Following is a rundown of the chief new laws affecting motor carriers. The figure 85 which precedes the public law number indicates that the law was passed by the present (85th) Congress:

Contract Carrier Rates

Public Law 85-124, formerly S943, amends the Interstate Commerce Act to require motor contract carriers to file actual, and not minimum, rates. However, a contract carrier which serves a single shipper and has done so for at least one year may file "reasonable minimum rates and charges."

Even in this instance the ICC may decide that the public interest demands the presentation of actual rates. As regards carriers serving multiple shippers, the new law specifically notes that the carriers are not

bound to offer the same rates for the same services to all shippers.

ICC Penalties Increased

Public Law 85-135, formerly S1492, prescribes more stringent penalties for carrier violations of IC Act provisions. First-offense fines will be lower than those for subsequent offenses, and fines in both categories are to be generally heavier than those previously levied.

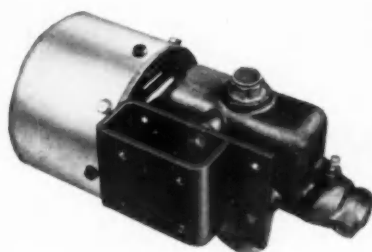
The ICC recommended passage of the law so as to permit fines that would have some value in preventing violations, especially in connection with the Commissions Safety Regs.

Contract Carrier Definition

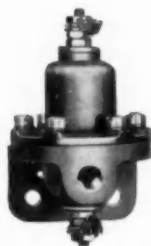
Public Law 85-163, formerly S1384, changes the definition of contract carrier by motor vehicle. It amends the IC Act to explain the terms of contract carrier operation, whether for an individual shipper or a limited number of shippers.

Contract roles, according to the new law, are performed "either (a) for the furnishing of transportation services through the assignment of motor vehicles for a continuing period of time to the exclusive use of each person served or (b) for the furnishing of transportation services designed to meet the distinct need of each individual customer." ICC now has the job of deciding which contract carrier permit holders retain their status under the new definition.

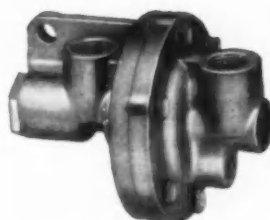
(TURN TO PAGE 190, PLEASE)



ACTUATING UNITS



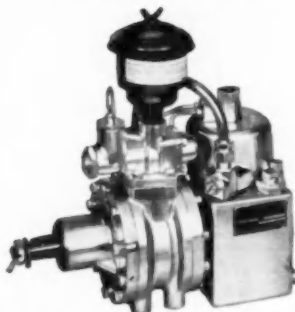
WARNING DEVICES



PROTECTION VALVES



CONTROL VALVES



ROTARY AIR COMPRESSORS



APPLICATION VALVES

Wagner Air Brake Components can help make your fleet safer... more economical!

Safe, trouble-free, dependable—that's the report of thousands of fleet operators from coast-to-coast, about Wagner Air Brake Components. Their experience over the years is *proof* that these precision parts increase safety and reduce operating costs.

The high-performance standards set by Wagner Air Brake Components are a direct reflection of the "Quality Control" exercised in the manufacture of Wagner Air Brake Systems. Every part—every fitting—every connection *must* meet rigid factory inspection and testing before being released for

shipment. This is your assurance that when you select Wagner Air Brakes, you know you are getting the finest air brake units to be found anywhere.

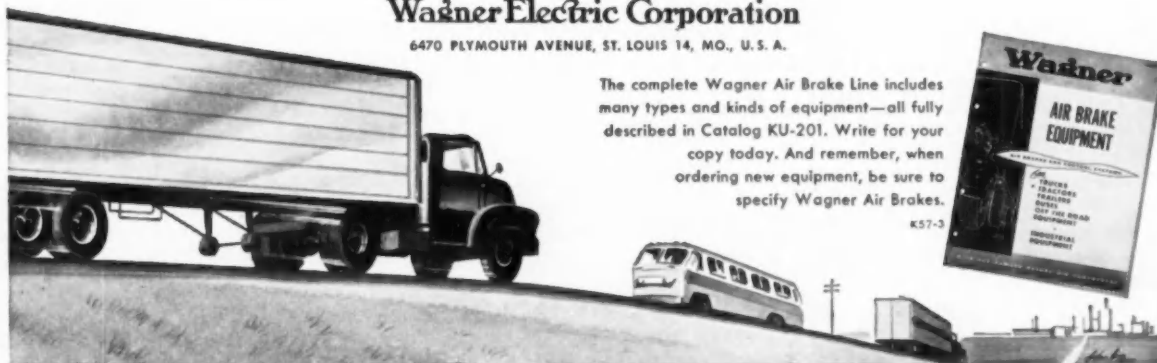
Wagner factory service branches in twenty-four major cities and air brake distributors throughout the United States and Canada service Wagner air brakes; and since Wagner air brake systems are used by a large number of fleets, mechanics everywhere are experienced in the repair of Wagner air brakes.

Wagner Electric Corporation

6470 PLYMOUTH AVENUE, ST. LOUIS 14, MO., U. S. A.

The complete Wagner Air Brake Line includes many types and kinds of equipment—all fully described in Catalog KU-201. Write for your copy today. And remember, when ordering new equipment, be sure to specify Wagner Air Brakes.

K57-3



LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMaX BRAKE LINING • AIR BRAKES • AIR HORNS • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

Time—Not Mileage

Here's how a low-mileage fleet schedules PM inspections to

Equipment Inspection Schedule

Month	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan	1																															
Feb	1																															
Mar	1																															
Apr	1																															
May	1																															
Jun	1																															
Jul	1																															
Aug	1																															
Sep	1																															
Oct	1																															
Nov	1																															
Dec	1																															

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DOWELL INCORPORATED
EQUIPMENT INSPECTION GUIDE

DISTRICT _____ STATION _____ FLEET NO. _____

MILEAGES SPEEDOMETER _____ TACHOMETER _____ DATE _____

THE FOLLOWING SERVICE INSPECTIONS AND PREVENTIVE MAINTENANCE OPERATIONS ARE BASED UPON THE OPERATOR'S DAILY CHECK-UP OF THE ENGINE OIL LEVEL, RADIATOR WATER LEVEL, TIRE WEAR PATTERN, TIRE PRESSURES, CLUTCH PEDAL CLEARANCE, BRAKE PEDAL RESERVE, AND OPERATION OF THE LIGHTS, HORN, WINDSHIELD WIPER AND INSTRUMENTS. THESE ITEMS MUST ALWAYS BE PROPERLY MAINTAINED.

WEEKLY INSPECTION

OPERATION	O K	NEED ATTN
T SYSTEM		
REL AND CONDITION		

257 80 1-66

DOWELL INCORPORATED
MAINTENANCE REPAIR REQUEST

DATE _____ UNIT NO. _____

OPERATOR _____

REPAIRS NEEDED ON THIS UNIT	REPAIRED BY
(1)	
(2)	

These three forms guide Dowell's PM program. Form at top schedules units for service. Form in center shows items to be inspected and repaired if necessary. Form at bottom is driver's report which is filled out after every job to which vehicle has been assigned. Schedule form is 2 x 3 ft sheet

AS IN MANY other private fleets, transportation is a means to an end at Dowell, Inc. As a result, vehicles take a back seat to the costly and complex auxiliary equipment they carry in this fleet's maintenance program.

This is not to say that they are neglected. Far from it. If anything, up to now Dowell has favored over-maintenance, rather than risk the chance of breakdowns. Policy has called for regular weekly, monthly

and quarterly inspections for all vehicles, with the work being handled either in Dowell's own shops or at local truck dealers. (Nearly all Dowell's passenger cars are leased and are serviced by the leasing company.)

In many shops, truck and tractor servicing provides the control factor on labor costs. It is farmed out according to ratios of work-

Sets Maintenance Pace at



prevent costly breakdowns in the field

loads in the Dowell shops, leaving Dowell mechanics to concentrate on the complex auxiliary equipment. Mileage means very little, of course, as a gage of maintenance needs. Auxiliary equipment may run up to ten times the service hours clocked by the truck or tractor that pulled or carried it. So maintenance needs for auxiliary gear are usually greater.

Since it is hardly practical for a shop to set up schedules for each component of the equipment in its care, PM is geared to the most frequent needs. The attitude is fostered among station managers that it is better to over-service than to under-service their fleets.

Another factor in favor

of over-servicing is that the nature of the business is somewhat feast or famine. Dowell's oil well and industrial treatments seem to be ordered in batches, and competition encourages clients to expect prompt service. Therefore PM involving shopwork tends to go out the window when the panic's on. Sometimes mechanics are even left with little to do in the shop. Often they "follow the fleet" to the job, to do what they can and to be handy, just in case.

A final element in over-servicing is that the balance of equipment varies. Southwestern fleets are almost all for oil well treating, the east coast stations do only industrial cleaning, while some districts such as the one centered at Cleveland, Ohio, are about evenly balanced. While standardizing on the PM scheduling means over-servicing on some units, it assures management that no units are neglected.

Dowell's "equipment inspection schedule" is a carefully plotted graph. Adhered to, with a minimum of juggling to meet field conditions, it can ensure that every piece of equipment receives proper PM without jamming even a small shop. It is a 2 x 3 ft sheet posted on the shop wall. Sometimes a duplicate is kept in the shop office for reference in scheduling equipment.

As illustrated on page 92 (the topform) it has vertical columns representing the days of the week, for a total of 12 weeks. Down the sheet are horizontal lines, one for each vehicle operating out of the shop. A letter in the square formed by a column and a line

Continuing his report of a lengthy visit at Dowell, Inc., of Tulsa, Okla. (Sept., page 66), Bill Palmer tells how the fleet's preventive maintenance program works and the results it gets. In the next article in this series—in the December issue—you will see how scientific tests help Dowell to choose qualified equipment operators and supervisors.

shows that the vehicle listed on that line is due for maintenance service on that day.

Letters show which service is due . . .

- "W"—for weekly—includes some 25 items.
- "M"—for monthly—includes all "W" service plus an added 23 items.
- "Q"—for quarterly—includes all "M" service plus an added 10 items.

The schedule is planned

around the "Q" inspection and service. The aim is to avoid having more than one quarterly in the shop on any given day, regardless of the size of the shop. In small shops only one or two quarterlies per week will be scheduled.

First vehicle on the list gets its first quarterly on Monday of the first week on the chart. The second vehicle is assigned a quarterly on Tuesday of the second week, the third gets Wednesday of the third week, and so on. If a shop has over 12 vehicles, the quarterly for the thirteenth will also fall in the first week. To avoid overloading Monday, its inspection is set for Tuesday. This automatically staggers the quarterlies for the next 11 units throughout the schedule. In like manner the twenty-fifth vehicle has its inspection scheduled for Wednesday of the first week.

This PM schedule is
now due for a change. Weekly and monthly servicing
(TURN TO PAGE 135, PLEASE)

We'll build a **MACK TRUCK**





in your office!

Customer-built is the word for any Mack truck.

Every Mack owner gets an individualized Mack. One that meets his particular demands and problems best because it's individually assembled from the wide variety of interchangeable Mack components.

Every Mack owner gets the most efficient horsepower for his operation... the type of engine—gas or Diesel—that he needs... the transmission, cab, frame, axles, differentials and accessories for his specific jobs.

And because Mack makes far more of its own product than any other maker, every Mack owner gets components engineered to work in harmony—a factor that helps account for a big Mack PLUS: those extra months and years of high truck *earning power*.

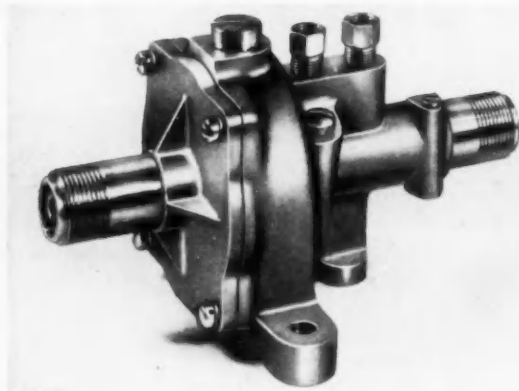
Your Mack representative will gladly drop by and “build a Mack in your office”—develop with you the individualized Mack that will handle *your* important hauling jobs with the dependability and low operating costs for which Macks have been famous for over 50 years.

Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

MACK
first name for
TRUCKS



New Road Speed Governors Announced



By Holley Carburetor Co. . . .

HOLLEY CARBURETOR CO. has just made available a governor system for any range of maximum road speed desired by the fleet operator. The road speed governor valve, driven by the speedometer cable from the transmission, combines centrifugal speed control with vacuum actuation of the diaphragm to control the governor throttle.

Because the road speed governor controls maximum road speed only, Holley supplies a more complete package that will also control the higher range of engine speed. This is done in connection with the existing engine-driven governor control valve which limits engine rpm in the higher range.

If Both Low Gear

engine speed control and road speed control are desired, the road speed governor valve and the engine governor valve may be arranged in a series. In this case both governor valves are connected to the same control diaphragm and throttle in the combination carburetor and governor body.

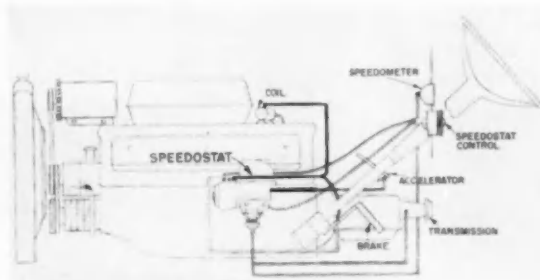
As the Governed Speed

is approached, centrifugal force overcomes the spring force and the weight moves outward. The weight partially covers the air bleed hole in the cross shaft, restricting the flow of air. The pressure differential, due to increased vacuum, allows the diaphragm to overcome the force of the spring on the throttle valve; and it moves the throttle to a restricted opening position.

In operation, therefore, the governor weight is always balanced between centrifugal force and the valve spring. Similarly, the governor throttle diaphragm is always balanced between the pressure differential on both sides and the tension of the throttle spring.

Any Slight Change

in vehicle speed upsets this balance, causing the centrifugal valve to react. This results in varying the amount of air, thereby varying the pressure balance on the diaphragm.



. . . By Perfect Circle Corp.

A REGULATING DEVICE that will control speed at any pre-set rate, but will also permit the driver to accelerate beyond the pre-determined speed for a short time in special circumstances, has been announced by Perfect Circle Corp., Hagerstown, Ind.

Called the Speedostat by the company, it will be offered as optional equipment on several 1958 passenger cars. Price will be about \$75 to \$100 installed at the factory. Kits might later be made up to fit the control unit to certain models, in which case installation could be made in about two hours by a garage mechanic.

In the Speedostat,

a limiting speed may be set on a dial mounted on the instrument panel or on the steering column. The vehicle can then be accelerated up to the chosen limit. At that point the accelerator pedal offers resistance and will hold the set speed limit.

If the driver finds himself in a spot where additional speed is needed for a few seconds, as in passing, he can get it by pushing down on the accelerator beyond the resistance offered by a spring of 24-lb compression. When the emergency is past, the driver can relax the pressure, the control device will return to idle speed, and then can be accelerated up to the limit again.

Another feature

of the control device is the locking button. When a button on the speed selector is pressed, the unit is locked at the speed set and will maintain that speed automatically without the need for the driver to use the accelerator. A touch on the brake pedal unlocks the device instantly.

The device controls road speed only, rather than engine speed—thus it does not limit engine performance.

Electro-mechanical in design,

it is driven by the transmission through a cable that replaces the speedometer cable, and the speedometer cable runs from the unit to the speedometer. A cable runs from the dial selector to a helical spring in the mechanism. This spring controls a flyball governor according to calibrations of the spring. The governor opens and closes contacts energizing a small 12-volt reversible motor in the unit. The motor, running backward and forward according to the action of the governor, activates a rocker arm connected with the linkage to the accelerator and carburetor.

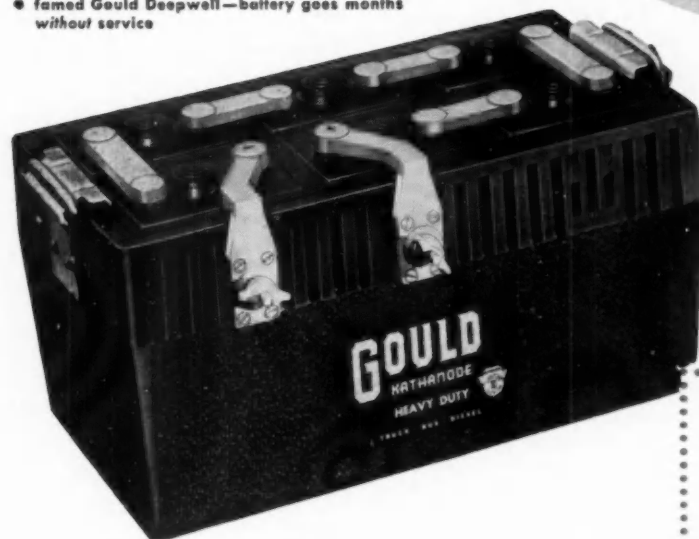
300%

more resistance to overcharge*
greater resistance to undercharge*
the two worst
battery killers

new GOULD

and brawny **GOULD** batteries have these features for long over-the-road hauls or stop-and-start city service.

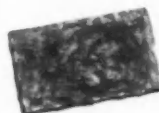
- thicker stronger plates—for extra miles of service
- new hard-rubber containers—space for bigger plates, extra electrolyte
- new cell supports—extra protection against vibration, bumps
- new element protectors—reduce damage from careless servicing
- double insulation—stop plate oxide shedding
- famed Gould Deepwell—battery goes months without service



STAY STRONGER LONGER
 —because of this silver lining

HERE'S WHY

Corrosion eats away battery grid material just like rust eats away bare steel. Coated steel lasts indefinitely because it doesn't rust. Similarly, silver cobalt coats the battery grids, protecting them from corrosion. The grids last longer—the battery performs better—stays stronger longer.



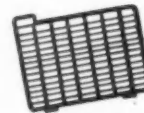
Bare unprotected steel rusts



Coated steel resists rust



Unprotected battery grids corrode



Silver cobalt grids resist corrosion

Get the complete silver cobalt story from your Gould dealer — or write

GOULD-NATIONAL BATTERIES, INC.
 SAINT PAUL 1, MINNESOTA

*Overcharging and undercharging together account for 80% of all battery failures! New Gould silver cobalt batteries have triple resistance to overcharge, greater resistance to undercharge—compared to SAE minimums.

GET GOULD BATTERIES FOR YOUR FORKLIFT TRUCKS

October News Roundup



One of the world's oldest internal-combustion engines, built by its inventor, Nikolaus August Otto, was presented to the Smithsonian Institution last month by a German engine manufacturing firm.

A gift of Kloeckner-Humboldt-Deutz A. G., of Cologne, Germany, was placed in the Smithsonian's new Hall of Power Machinery. It is in complete working condition, developing one-half hp at 80 rpm. The so-called "atmospheric engine" is one of a group of about 5000 that Otto manufactured between 1866 and 1876.

Protests from residents of Orinda, Cal., prompted Pacific Intermountain Express to abandon a plan to build a general headquarters there, says President A. S. Glikbarg. As a gesture of community public relations, PIE has moved its headquarters office in Oakland, Cal., from 229 Adeline St. to 1417 Clay St. Owners of the company's new headquarters have agreed to buy the Orinda building which PIE has owned for three years.

Fruehauf Trailer Co. has elected W. E. Grace of Fort Worth, Tex., as executive vice president. Grace assumed his new duties in Detroit this month after leaving

Fort Worth as general manager of Hobbs Trailers, a division of Fruehauf.

W. Howard Amor, Cleveland, Ohio, was elected president of the National Truck Leasing System at the group's 13th annual meeting held in Chicago last month. To serve with him will be Samuel J. Palisano, Buffalo, N. Y., vice president; John J. Barrett, San Francisco, Cal., treasurer; Frank Max, Jr., Baltimore, Md., secretary, and members of the executive committee, Nathan Katzman, New York; Haskell Schultz, Fort Wayne, Ind.; Walter Mills, St. Louis, Mo.; John Black, Jr., Birmingham, Ala., and Howard Willett, Jr., Chicago. Miss Martha Dunlap continues to hold appointment as executive director.

New managing director of the Automobile Manufacturers Assn., Detroit, is Harry A. Williams, who succeeds William J. Cronin upon the latter's retirement in November.

(TURN TO PAGE 226, PLEASE)

1957 Domestic Truck Factory Sales by GVW

	6,000 lb. and less*	6,001-10,000*	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	26,001-33,000	Over 33,000	Total
January.....	42,027	10,018	1,836	7,203	3,514	3,099	2,932	2,579	73,208
February.....	37,847	11,292	2,391	10,407	3,023	3,139	2,795	2,799	73,693
March.....	39,622	11,272	2,438	8,362	3,389	2,691	2,935	2,814	73,523
April.....	39,176	12,954	2,945	13,003	5,728	3,973	3,271	2,362	84,410
May.....	38,830	12,813	3,614	12,164	5,769	3,541	2,979	3,220	82,930
June.....	36,819	11,717	3,076	10,636	5,565	3,450	2,602	2,972	76,859
July.....	37,742	10,446	2,629	10,429	5,806	4,412	3,010	2,376	76,856
Total—7 Mos. 1957	272,069	80,512	18,929	72,206	32,812	24,305	20,524	20,122	541,479
Total—7 Mos. 1956	227,263	95,940	21,333	96,792	34,295	31,075	44,301	**	551,000

* Prior to Jan. 1957, vehicles below 10,001 G.V.W. were grouped as follows: "5,000 and less" and "5,001-10,000."
** Included with 26,001-33,000 group. Source: Automobile Manufacturers Assn.

Service Pins

"Miss Silver Dollar," Reno, Nev., showgirl Shirley Lou Carpenter, presents 20-year awards to five employees of Tranter Manufacturing, Inc., Lansing, Mich. Receiving awards are M. M. Brown, President James R. Tranter, Mrs. Lee Worthington, Leonard Huhn and Max Parker. The awards were made on the 25th anniversary of the company.

1957 Truck Trailer Shipments

Type	July	Seven Months
Vans		
Insulated and refrigerated.....	264	2,809
Steel.....	59	412
Aluminum.....	205	2,397
Semi-insulated.....	30	373
Steel.....	30	373
Aluminum.....		
Furniture	80	1,072
Steel.....	75	979
Aluminum.....	5	93
All other closed-top.....	1,467	11,688
Steel.....	642	5,562
Aluminum.....	815	6,106
Open-top.....	239	1,571
Steel.....	70	929
Aluminum.....	169	942
Total—Vans.....	2,100	17,813
Tanks		
Petroleum.....	329	2,824
All other.....	108	915
Total—Tanks.....	437	3,739
Pole, pipe and logging		
Single axle.....	26	249
Tandem axle.....	46	417
Total.....	72	666
Platforms		
Racks, livestock and stake.....	224	1,334
Grain bodies.....	67	879
Flats, all types.....	519	4,359
Total—Platforms.....	810	6,572
Low-bed heavy haulers.....	213	1,954
Dump trailers.....	145	1,323
All other trailers.....	374	2,167
Total—Complete trailers.....	4,151	34,234
Chassis only.....	142	1,964
Total—Trailers and chassis.....	4,293	36,198

Source: Industry Division, Bureau of the Census.

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HOW BELL SYSTEM COMMUNICATIONS SERVE THE TRUCKING INDUSTRY



Every tag a Yellow Transit unit. Dispatchers at Kansas City keep this control board posted with information received from all terminals by private line telephone.



"Twenty-seven terminals keep us posted by private line telephone"

—George E. Powell, Jr., President, Yellow Transit Freight Lines, Inc.

"For 24-hour-a-day control of freight movements between the Great Lakes and the Gulf of Mexico, we rely on the speed and convenience of private line telephone service," says George Powell, of Yellow Transit.

"Bell System circuits connect 27 terminals to our headquarters in Kansas City. Over this network, we keep in constant touch with our 1000 trucks. We know who's loading, who's in the shop, who's en route.

"When problems occur, they are solved quickly and

effectively in timely discussions. That way, freight is expedited, bottlenecks are avoided, and our customers get better service."

.

Private line telephone service can help make your operations run smoothly. Just call your Bell Telephone Company business office. A representative will gladly explain how it can work for you. No obligation, of course.

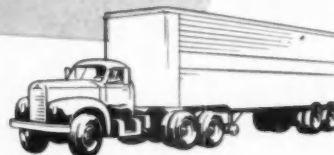
BELL TELEPHONE SYSTEM



PRIVATE LINE TELEPHONE • PRIVATE LINE TELETYPEWRITER • DATA TRANSMISSION SYSTEMS
CHANNELS FOR: REMOTE METERING AND CONTROL • TELEPHOTOGRAPH • CLOSED CIRCUIT TV

Only **MIDLAND** Goes Beyond ICC Braking Requirements With All These Positive-Plus Features!

Have you converted your tractor-trailers to comply with the new ICC emergency braking regulations? If not, be sure to specify Midland equipment, for only Midland gives you all these **EXTRA SAFETY AND ECONOMY FEATURES** — in addition, of course, to the basic ICC requirements.



ICC Requires that . . .

Tractors must be equipped with two means of activating the emergency feature of the trailer brakes.

Tractor brake system must be protected against air loss in the event of trailer breakaway or leakage in trailer system.

All new trailers must have a "no-bleed-back" emergency relay valve to prevent back flow of air from reservoir through supply line.

MIDLAND Gives You These **PLUS** Features . . .

● **MIDLAND DASH CONTROL VALVE** applies and releases trailer brakes as fast as service brake.

● **MIDLAND DASH CONTROL VALVE** is pull-type to eliminate accidental application.

● **MIDLAND DASH CONTROL VALVE** provides visual indication whether or not trailer system is charged.

● **MIDLAND DASH CONTROL VALVE** provides automatic application below low pressure warning point so that vehicle can clear traffic lanes.

● **MIDLAND TRACTOR PROTECTION VALVE** can be installed on your present shut-off cock brackets.

● **MIDLAND TRACTOR PROTECTION VALVE** has rugged mounting for protection on breakaway.

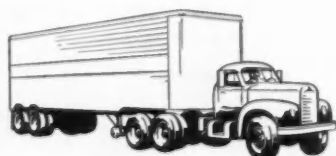
● **MIDLAND TRACTOR PROTECTION VALVE** works with all types of emergency relay valves.

● **MIDLAND EMERGENCY RELAY VALVE** is large capacity for fast application and release.

● **MIDLAND EMERGENCY RELAY VALVE** eliminates danger of vehicle drive-away without sufficient air in system.

● **MIDLAND EMERGENCY RELAY VALVE** is easily serviceable without removal from vehicle.

● **MIDLAND EMERGENCY RELAY VALVE** gradually applies the trailer brakes in the event of loss of air below 45 psi.



Ask your nearest Midland Distributor for complete information on equipping your tractor-trailers to comply with the latest ICC braking regulations. He'll welcome a chance to serve you.

THE MIDLAND STEEL PRODUCTS COMPANY

OWOSSO DIVISION • OWOSSO, MICHIGAN
Export Department: 38 Pearl Street, New York, N.Y.

1957 Truck Specifications

KEY TO DEFINITIONS

MAKE AND MODEL
Only Domestic Truck Models are listed.

OPTIONAL UNITS
For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE
The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE
The Gross Weights published herewith are

those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT
The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the

weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE
The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE
The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost. If it differs from the standard size. Dual tires are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE
The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.
Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE
Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS
Unless given the designation (N)—meaning not available as a tractor, all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES—ALL
B—Bendix.
BL—Brown-Leaf.
Bu or Bud—Budd.
BW—Bendix-Westinghouse.
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cu or Cum—Cummins-Diesel.
Deu—Deutz Air Cooled Diesel engine.
Eaf—Eaton.
F—Ford.
Fu—Fuller.
G-H—Goodyear-Hawley type.
GM—General Motors Corp.
H—Hotchkiss.
Her—Hercules.
HS—Hall-Scott.
Int—International Harvester.
L—Lockheed.
LeR—LeRoi.
LM—Lockheed front, Wagner "hi-Tork" rear.
LT—Lockheed type front, Timken rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Os—Owen.
Op or Opt—Optional.
Shu—Shuier.
Spi—Spicer.
T or Tim—Timken-Detroit Axle Co.

WHEELS DRIVEN
2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE
Location
4—Four Wheels, front and rear.
4r—Four Wheels, rear only.
Type
I—Internal.
X—External.
Operation
A—Air.
H—Hydraulic.

V—Vacuum.
D or Dp—Dual Primary.
BRAKES—HAND
Location
C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type
D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.
F—Mechanical, foot operated.

BRAKE DRUMS
Material
a—Cast alloy iron.
A—American Car Foundry.
C—Cast iron.
C—Centrifugal cast.
C—Composite Front, Cast iron in rear.
C—Centrifuse.

CL—Copper Iron.
Co—Composite.
CX—Front, centrifugal cast; rear, composite.
D—Dayton.
E—Ermalite.
G—Gumite.
N—Nickel Iron.
S—Steel.
(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME
Type
C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
L—Drop Center.
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.

Z—Reinforced (X) member frame, box type sections.
BO—Box girder.
H—Heat treated.

REAR AXLE
Final Drive and Type
R—Revel.
CD—Chain Drive.
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
4—Three Quarters Floating.
4s—Semi-floating.
T—Torque Tube.

GEAR RATIOS
(*) Only one ratio.
Drive and Torque
H—Hotchkiss (springs).
R—Radius Rod.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD
V—Yes.
N—No.

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-over-Engine design.
l.c.f.—Low cab forward design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Ford or Chevrolet Models.
(R)—Remanufactured Ford.
A—Denotes "Includes Cab" when used with weights or prices.

AVAILABLE
*—Conventional or C.O.E. available.
†—Air brakes available.
—Two or three speed auxiliary transmission available.
A—Two speed rear axle available.

CHEVROLET
*—Includes spare wheel, full fuel tank and cooling system.
†—Tridemaster V-8 engine available.
‡—Taskmaster V-8 engine available.
**—5-speed transmission available.
**—Powermatic available.
**—Front, 2.30 x .762; rear, 2.30 x 1.16.
*—Overdrive optional.
††—Theoretical I.D. (journal diameter plus clearance) front 2.6856; front center, 2.7166; rear center, 2.7478; rear, 2.7788. Total effective length (overall length minus chamfers) 4.127.
A—2.17.5 D optional.
†—2.17.5 F available.
P—488 sq. in. lining area used with 7.17.5 F axle.

††—Front, 2.69x1.06; rear, 2.78x1.19.
**—Front, 2.50 x .96; rear, 2.50 x 1.04.
†—Synchro-mesh 3-speed H.D. optional.
†—4-speed synchro-mesh transmission optional.
**—Two-speed rear axle available.
†—TM brake optional.
†—Hydraulic available.
†—4.11 available with optional overdrive.
††—Air over hydraulic brakes available.
*—715 sq. in. drum area with optional 7.17.5 F axle.
†—4.11 available with optional overdrive.
††—3.36 available with optional automatic transmission.
†—6.17 available.
††—Spicer H.D. 5-speed transmission available.
††—V-8 Turbo-Fire 265 or Turbo-Fire 283 engines available.
††—Powerglide or Turboglide optional.
*—V-8 Super Taskmaster 283 optional.
*—V-8 Super Loadmaster 322 optional.
*—Frame reinforcements 8 1/4 x 3 1/4 x A optional.
††—Includes full fuel tank and cooling system.
††—Includes spare tire, full fuel tank and cooling system.

COLEMAN
*—11.00.22 also available.
*—Fu5A65 or Spicer 6352 also available.
†—Cum HBR600 also available.
†—488 sq. in. lining area used with 16.5.1800.

DIVCO
*—Front only, rear, 7.50.168.
†—Front only, rear, 7.50.208.
†—Front only, rear, 8.25.168.
†—Front only, rear, 7.50.201D.

DODGE
*—18000 with 217 in. wheelbase.
*—371 with two-speed axle.

DUPLEX
†—Torque Divider, Timken T70-2 speed.

FABCO
††—see same footnote under Chevrolet.
**—With 3-speed aux. ary and 2-speed transfer case.
RC—Chevrolet axle remanufactured.
RF—Ford axle remanufactured.

FEDERAL
*—Also available with tandem rear axle.

FORD
*—Overdrive and Fordomatic optional.
†—Four-speed trans., overdrive and Fordomatic opt.
†—Four-speed trans. and Fordomatic optional.
†—Three-speed trans. and Fordomatic optional.
†—Transmatic optional.
†—Two-speed axle optional.
†—Five-speed trans. and Transmatic optional.
†—Auxiliary trans. optional.

FWD
†—Transport tractors with one man cab beside the engine.
A—23 FT rear axle is a driving axle plus a trailing axle.
*—Model available in c.o.e.

KENWORTH
††—Timken TK-500 PA Trailing Axle.
†—14.00.24, front; 16.00.24, rear.
†—Optional transmission.
*—C.O.E. optional.
*—One man cab.
†—Torque converter plus Torquematic transmission optional.
†—Both C.O.E. and cab beside engine optional.
††—14.00.24 front; 18.00.25 rear.
**—Cummins NHRB51D 600.
††—Allison TCL 654 plus TG 607.
*—1148.
*—1108.

MARMON-HERRINGTON
*—Three-speed trans. opt.
†—Five-speed trans. opt.

OSHKOSH
*—Includes cab.
*—1091 cu. in.
*—Hydraulic coupling optional.
*—Dependent upon engine.

REO
*—Model 331-0A and 331-0A LPG engines can be furnished.
†—Two speed axle available.
†—Plus full outer channel, 9.5x3 1/4 x 1/2.
†—Model 255-0A-LPG or 292-0A engine can be furnished.
†—OH-170 or OH-160 LPG engine can be furnished.
†—OH-160LPG engine can be furnished.
†—Model CV-235 or CV-220-LPG engine can be furnished.

STUDEBAKER
*—Two speed 5.93-8.10 or 6.48-8.86 optional.
†—Two speed 6.16-8.48 or 6.61-9.09 optional.

TRUCKSTELL
††—With 3 speed power divider.
*—Weight with cab and maximum tires.
†—Including slip-over reinforcing frame channels.
†—Air brake optional.

WARD LA FRANCE
†—Available with optional rear axle.
††—Available with 11.00.22 or 12.00.20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.
††—Auxiliary transmission, Fuller 3A65, 3B65, 3A92 and 3B92.

WILLYS
*—Overdrive optional.

(Turn to Next Page, Please)

Your trouble-free,
profitable mileage
goes UP with Fm
copper-alloy bearings

1

The steel for the bearing back is to our specifications for strength and bonding qualities.



2

The pure copper-lead lining of sintered metal powder was developed for heavy-duty service.



3

Stability of the lining alloy is assured by addition of the brass barrier.



4

Both bearings and shaft are protected during the break-in period by this lead-tin overplate.



5

Overall resistance to corrosion is provided by this pure tin flash plating.



Fleets prefer Fm sintered copper-alloy bearings for just one reason: They assure longer, trouble-free mileage in heavy-duty operation. The reason lies in step No. 2. This patented, pure metal powder combines the strength of copper

and the "softness" of lead in exact proportion for maximum performance results. Your Federal-Mogul jobber carries a complete line of Federal-Mogul bearings for fleet requirements and will give you prompt service!

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.

Fleet



Mileage

RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE

(Continued from Page 102)

MAKE MODEL	Chassis List Price	WHEEL-BASE Minimum Maximum Standard	Chassis Vehicle Weight (Gross Vehicle Weight For Normal Service)	TIRE SIZES		ENGINE DETAILS				TRANSMISSION		REAR AXLE			FRONT AXLE Make and Model	BRAKES			C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
				Dual rear S-single rear	Maximum Tire Size	Standard (Base definition)	Front and Rear	Maximum Tire Size (Duals un- less noted)	Make and Model	No. of Cylinders Bore and Stroke	Displacement	Comp. Ratio	Torque lb.-ft.	H.P. at R.P.M.		Main Bearings	Governor Standard	Make and Model				Forward Speeds	Make and Model	Gear and Type	Drive & Torque	Gear Ratio	Range in High	Make and Model	Operation Type	Linking Area	Drum Material	Hand Location Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1	Divco-Conv'd 344	3230	115	7500	3175/50 16S	3175/50 16S	Her QX133	6-3.5	230	12.0	120	66	2700/1	W.G. T-87	Int L150	H	H	57-9	16.0W	W-B	Int L150	W-B	235	235	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	5



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When Hertz trucks go out Cities Service is in!

Every time one of the 300 trucks of Oklahoma City's Hertz operation leaves the garage, Cities Service is in! . . . in the gas tank . . . in the crankcase.

For 15 years, Hertz, in a number of communities including Oklahoma City, has relied on Cities Service products for top maintenance of its U-Drive-It fleet . . . and today uses Cities Service Milemaster Gasolene and C-300 Motor Oil.

Result: Many of Hertz' gasolene units are getting over 100,000 miles before overhaul—despite the fact that any truck may have dozens of different drivers in this time.

Combined with excellent and thorough maintenance in the Hertz shop, this record with Cities Service gasolene and C-300 Motor Oil is one of the important reasons why Hertz can make truck rental outstandingly economic for its customers.

Likewise, it is good evidence that Cities Service products can make your fleet operation more economic, too. Get all the facts from a Cities Service Lubrication Engineer, or write: Cities Service Oil Company, Sixty Wall Tower, New York 5, N. Y.

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

COMMERCIAL CAR JOURNAL, October, 1957



Where Good Mileage Begins. Cities Service Gasolene has been giving Hertz trucks top mileage for years. Mighty important when you consider Hertz supplies its customers gasolene.



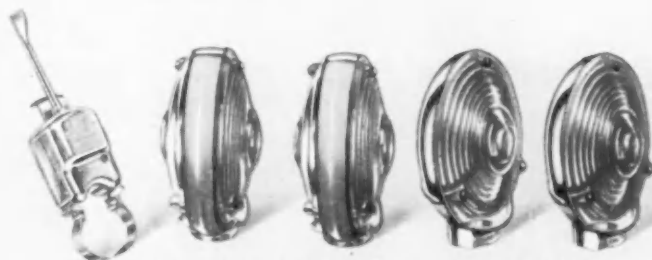
Hertz Takes the Maintenance Headache that their customers would ordinarily have if they owned their own fleet. Trucks are kept in peak operating condition.

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new Signal-Stat 5-in-1
SIGFLARE system!*



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ALL AROUND PROTECTION...ALL THE TIME!**

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1. the most powerful Class A-Type 1 directional signals with positive pilot action to indicate system is functioning properly.
2. simultaneous flashing of all 4 signal lamps for emergency disability warning; the most effective safeguard against "sitting-duck" accidents.
3. two stop lights as powerful as Class A-Type 1 signal lamps.
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5. automatic tail light control for far more effective turn signals at night.

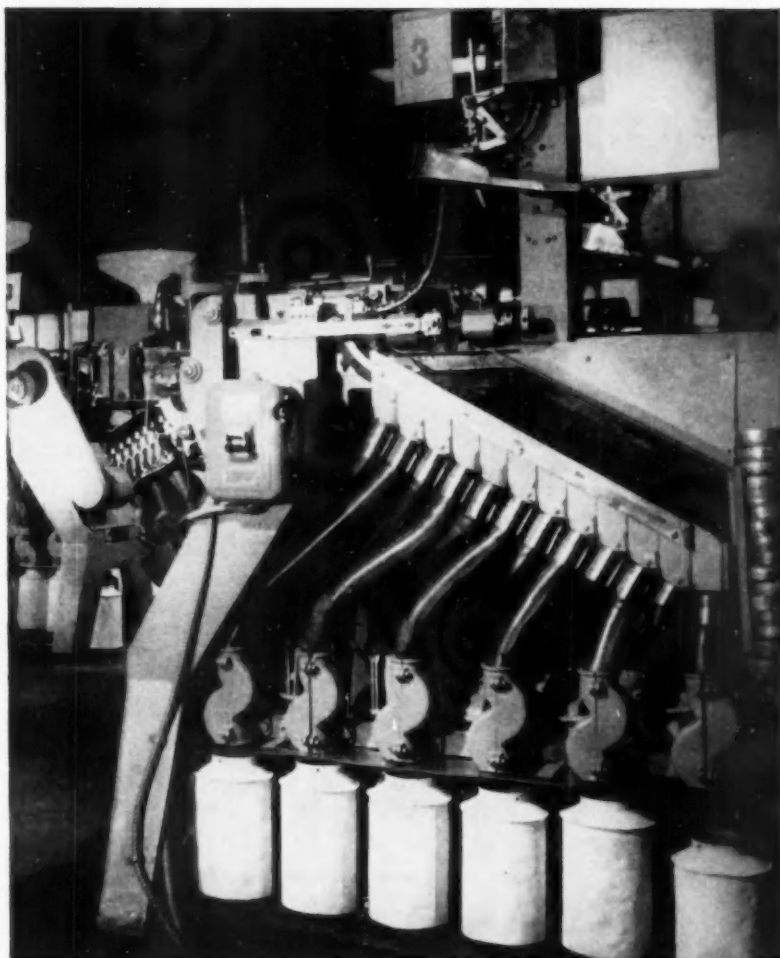
All this, plus many other exclusive Signal-Stat features, makes the Sigflare system a "must" for careful fleetowners. Don't stick your neck out; see your jobber or write for new complete guide to Signal-Stat safety lighting equipment TODAY!

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES		ENGINE DETAILS						TRANSMISSION		REAR AXLE		FRONT AXLE	BRAKES			FRAME				
						Dual rear Single rear	Standard Front	Maximum Authorized (Dual rear Single rear)	No. of Cylinders, Stroke and Bore	Displacement	Comp. Ratio	Max. Brake H.P. at R.P.M.	Number and Diameter of Gears	Governor Standard	Make and Model	Forward Speeds	Make and Model		Gear Type	Drive & Torque	Gear Ratio Range in High		Make Model	SERVICE		
																								Location	Area	Drum
1	Kenworth (D) 480S	33000	10750	10,000	20	11.00-22	Cum JTB	6	4x5	401.16	350	190-21007	4x13.13	99W5	12	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
2	Kenworth (D) 480S	42000	13000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
3	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
4	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
5	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
6	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
7	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
8	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
9	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
10	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
11	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
12	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
13	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
14	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
15	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
16	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
17	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
18	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
19	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
20	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
21	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
22	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
23	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
24	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
25	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
26	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
27	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
28	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
29	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
30	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
31	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
32	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
33	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
34	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
35	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
36	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
37	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
38	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
39	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
40	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
41	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
42	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
43	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
44	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
45	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15	Tim 3200	H	H	Tim FE900N	BW41A	716.1178	716.1178	TD	TD	9.5x3.5	C
46	Kenworth (D) 480S	33000	12000	10,000	20	11.00-22	Cum NHH-600	6	5x6	743.16	535-200	21007	4x13.13	BL 8241	15											

For Key to References and Abbreviations See Page 107

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Why no roller ever "gold bricks" in a TIMKEN® bearing



*(Another reason why
TIMKEN® bearings are first choice
with truck manufacturers)*

ALTHOUGH we make bearing rollers as uniform as precision machines can make them, we go a step further. This automatic sorter separates rollers of one size into subgroups with 125 millionths of an inch maximum variation. With rollers from the same subgroup in a Timken® bearing, you're sure all the rollers in a bearing share the work load equally. It helps assure quieter operation, longer life. It's another extra step we take to insure Timken bearing quality.

Designed by geometric law to roll true, Timken bearings are precision-made to live up to their design. Rigid quality controls assure it, every step of the way. We even make our own steel, America's only bearing manufacturer that does. That's why Timken bearings are first choice with the men who *make* trucks.

So take a hint from them. For the best possible tapered roller bearing replacement, always specify bearings trade-marked "TIMKEN". And for helpful service information, send for free booklet, "Timken Tapered Roller Bearings—Their Care and Maintenance". Write Dept. JCC-10, The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

**SINCE THEY'RE BEST WHEN
THE TRUCK IS NEW, THEY'RE
BEST FOR REPLACEMENT, TOO!**



TIMKEN *TAPERED ROLLER BEARINGS ROLL THE LOAD*

TRADE-MARK REG. U. S. PAT. OFF.



"One year's experience proved the economy of using Philgas for our fleet!"*

—ROY HUSER, President,
Transport Motor Express, Inc.,
Fort Wayne, Indiana



**ALONZO
HATHAWAY,**
Maintenance
Superintendent

"We're saving money and getting better performance with our Philgas-powered equipment!"

● Roy Huser says: "I told the boys we would give Philgas a one year trial. Well, we're certainly happy with the results, and we're converting more of our tractors to Philgas as quickly as we can!"

Mr. Huser, president of Transport Motor Express, Inc., started as a truck broker in the mid-1930's, and has piloted TME to an eminent position in trucking during the past 12 years. He knows the value of saving a maintenance dollar.

As Mr. Hathaway, TME's mainte-

nance superintendent, put it: "With our expansion plans, plus the size of our current fleet, we needed to give our maintenance and operating expense a close look. We've tried Philgas for a year on 20 of our refrigerator units. Results show: longer service-free operation; easier starting; longer battery life; extended plug life, and a saving in fuel cost."

Fleet owners all over the country are discovering the economy and better performance of Philgas. Write today for full information.

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[illegible]

For Key to References and Abbreviations See Page 101

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You can count on *Thompson*

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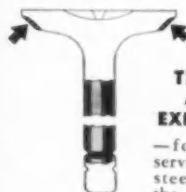
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			Minimum Standard	Maximum Standard	Gross Vehicle Weight (For Normal Service)	Standard Rear and Front (See definition)	Dual-gear	Dad-gear	No. of Cylinders	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M.	Main Bearings	Governor Standard	Make and Model	Forward Speeds	Clear and Type	Drive & Torque Range in High	Make and Model			Clear Ratio	Make and Model	Lining Area	Drum Area	Material	Mind Location
Six-Wheelers 1 Available 2 4-wheel drive 3 6-wheel drive 4 8-wheel drive 5 10-wheel drive 6 12-wheel drive 7 14-wheel drive 8 16-wheel drive 9 18-wheel drive 10 20-wheel drive 11 22-wheel drive 12 24-wheel drive 13 26-wheel drive 14 28-wheel drive 15 30-wheel drive 16 32-wheel drive 17 34-wheel drive 18 36-wheel drive 19 38-wheel drive 20 40-wheel drive 21 42-wheel drive 22 44-wheel drive 23 46-wheel drive 24 48-wheel drive 25 50-wheel drive 26 52-wheel drive 27 54-wheel drive 28 56-wheel drive 29 58-wheel drive 30 60-wheel drive 31 62-wheel drive 32 64-wheel drive 33 66-wheel drive 34 68-wheel drive 35 70-wheel drive 36 72-wheel drive 37 74-wheel drive 38 76-wheel drive 39 78-wheel drive 40 80-wheel drive 41 82-wheel drive 42 84-wheel drive 43 86-wheel drive 44 88-wheel drive 45 90-wheel drive 46 92-wheel drive 47 94-wheel drive 48 96-wheel drive 49 98-wheel drive 50 100-wheel drive 51 102-wheel drive 52 104-wheel drive 53 106-wheel drive 54 108-wheel drive 55 110-wheel drive 56 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For Key to References and Abbreviations See Page 101

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Traffic Control Speeds PU&D

A TRAFFIC CONTROL system which enables truck drivers to be routed to proper docks without leaving their vehicles for instructions has been instituted by the Rolled Steel Corp., Skokie, Ill.

On his arrival at the Rolled Steel warehouse, the driver announces his presence by means of a telephone installed within easy reach of the truck cab. The truck dispatcher on the other end of the wire issues docking instructions to the driver. He may be told to drive to a designated dock or, if no docks are open, to pull into the adjacent parking lot. Here he will await further instructions to be announced over a loud-speaker system.

This airport-style traffic management system enables top efficiency in loading and unloading operations. The flow of the firm's warehouse steel products is virtually uninterrupted by traffic snarls that would otherwise plague a busy industrial depot. The system also prevents the possibilities of a traffic jam on the main thoroughfare where the Rolled Steel plant is located.

Total cost of this time and trouble saving installation was negligible. Cost of this telephone was \$3.50 and the loud-speaker, \$250. The phone costs 75¢ monthly to operate.

1st Greasemonkey: "Yeah, it is really tough goin' these days. How do you meet expenses?"

2nd Greasemonkey: "My wife introduces them to me!"



FAMOUS AMERICAN WHEELS

The water wheel, grinding to feed a growing nation, is a treasured part of our national heritage.

Today, another famous American wheel—the Budd heavy-duty steel wheel—rolls millions of miles, carrying grain, and countless other goods, to a prosperous, still-growing country.

Budd's life-of-the-vehicle wheels, light in weight and low in cost, insure less down time and faster, safer runs. They've become "standard equipment"

NATIONWIDE SERVICE

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels, Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ATLANTA—John A. Harris & Son, Inc.
BALTIMORE—Standard Wheel & Rim Co.
BIRMINGHAM—Wheel, Rim & Parts Co.
BOSTON—New England Wheel & Rim Co.
BUFFALO—Fray, the Wheelman, Inc.
CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAVENPORT—Stone Wheel & Rim Co.
DAYTON—Rim & Wheel Service, Inc.

DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. & H. Wheel Service, Inc.
EVANSVILLE—Auto Wheel & Rim Co., Inc.
FARGO—Wheel Service Company
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel, Inc.
INDIANAPOLIS—Indiana Wheel & Rim Co.
JACKSONVILLE—Southeast Wheel & Rim Co.
KANSAS CITY—Borbein, Young & Co.
KNOXVILLE—John A. Harris & Sons, Inc.
LANCASTER—Standard Wheel & Rim Co.
LOS ANGELES—Wheel Industries, Inc.

LOUISVILLE—Auto Wheel & Rim Service
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Arling Equipment Co., Inc.
MOLINE—Mutual Wheel Co.
NASHVILLE—Boiler Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.
NEW HAVEN—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Co.
NEW YORK—Wheels, Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
OMAHA—Omaha Rim & Wheel Co.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Kay Wheel Sales Co.
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.

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PITTSBURGH
PORTLAND
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RALEIGH
RICHMOND
ROCHESTER
SALT LAKE
SAN ANTONIO
SAN FRANCISCO
SEATTLE
SOUTH BEND
SOUTH DAKOTA
SPOKANE
SPRINGFIELD
ST. LOUIS



for fleet owners countrywide. They're easily mounted, too. Just "button down" the ball-faced cap nuts. Their built-in alignment reduces tire wear, eliminates adjustments. And their permanently-attached rims do away with "rim creep."

Thinking About Tubeless? Budd has a complete line of road-tested economical tubeless wheels, completely interchangeable with conventional equipment.

The Budd Company, Detroit 15.



PITTSBURGH—Wheel & Rim Sales Co.
 PORTLAND—Six Robbies', Inc.
 PROVIDENCE—New England Wheel & Rim Co.
 RALEIGH—Carolina Rim & Wheel Co.
 RICHMOND—Dixie Wheel Co., Inc.
 ROCHESTER—Frey, the Wheelman, Inc.
 SALT LAKE CITY—Henderson Rim & Wheel Service
 SAN ANTONIO—Southwest Wheel, Inc.
 SAN FRANCISCO—Wheel Industries, Inc.
 SEATTLE—Six Robbies', Inc.
 SOUTH BEND—Wire & Disc Wheel Sales & Service
 SOUTH BEND—Wheel & Rim Sales Co.
 SPOKANE—Bearing & Rim Supply Co.
 SPRINGFIELD, ILL.—Illinois Wheel & Brake Co.
 SPRINGFIELD, MO.—Borbein, Young & Co.
 ST. LOUIS—Borbein, Young & Co.

ST. PAUL—Wheel Service Co.
 SYRACUSE—Wheels, Incorporated
 TACOMA—Six Robbies', Inc.
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CLEVELAND, OHIO—C. O. Brandes, Inc.
 4900 Euclid Avenue

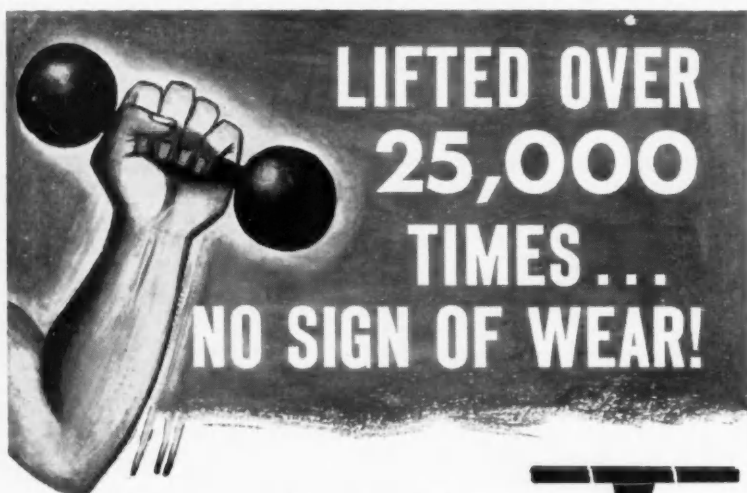
CANADA

CALGARY—Mutual Supplies, Ltd.
 EDMONTON—Alberta Wheel Distributors, Ltd.
 MONTREAL—Auto Wheels & Supplies, Ltd.
 TORONTO—Wheel & Rim Co. of Canada, Ltd.
 VANCOUVER—Wheels & Equipment, Ltd.
 WINNIPEG—Ft. Garry Tire & Auto Supplies, Ltd.

Budd

New Copco Trailer

Copco Trailer Division, Copco Steel and Engineering Co., Detroit, has introduced this new model truck-trailer, designated Model No. 93. The composite trailer is built with a low floor level in a straight line design to achieve maximum height and utilization of inside loading area. It also has a rear door with a 92¼-in. opening.



**LIFTED OVER
25,000
TIMES...
NO SIGN OF WEAR!**

... Proves outstanding durability of **HANSEN** Window Regulators for Commercial Bodies

An automatic testing device operating a HANSEN Regulator lifted an 18 lb. window over 25,000 times. Regulator showed no wear.

Here is conclusive proof of the **SUPERIOR DESIGN** and **RUGGED CONSTRUCTION** of **HANSEN** Window Regulators. It is matched by actual road-tested experience by thousands of **HANSEN**-equipped Commercial Vehicles. Discriminating Body Builders can specify nothing finer than **HANSEN**.

... a few **HANSEN** exclusive features:

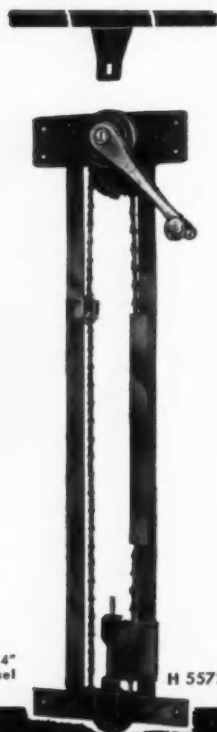
- Glass lifts in straight line—no catching or jamming.
- High grade steel construction insures strength and durability.
- Smooth 4-turn operation quickly raises and lowers window.
- Window automatically locks at any point.



Ask for the complete **HANSEN** Catalog.

No. 37 Regulator
Available in lifts from 14"
to 30"—Glass Channel
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A. L. HANSEN MFG. CO.
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H 5573

Bodies on Stilts

Continued from Page 71

of the box, the hoist can be raised to 15 in. and the legs set at that height.

Legs nest in recesses, fit against the inner skin of the van during travel. Each leg raises and lowers in a heavy sleeve. A heavy keeper pin, fastened by a cotter pin, fits through the holes in both the sleeve and leg.

Each sleeve is shaped like an "L." The leg of this "L" slides out of a sturdy tunnel under the floor of the container. Spurs on the leg restrict its outward movement. In travel, opposing legs butt together in the same channel.

When spotting a box, each leg is pulled down and pinned so the foot pad is an inch or two off the ground. Then the sleeve and leg are pulled out from the box. Legs are counterweight to make them easy to raise and lower. Where heavy freight requires added support, A-type legs are available.

Several container lengths for special purposes already have been used. A 10 and a 20-ft box has been set on the 33-ft long trailer that usually carries two 16-ft boxes. The 16-ft boxes have been used in two sizes—the standard 700-cu ft unit which is 86 in. wide and 78 in. high, and the 900-cu ft unit with 90-in. inside width and height.

END

Please Resume Reading Page 72

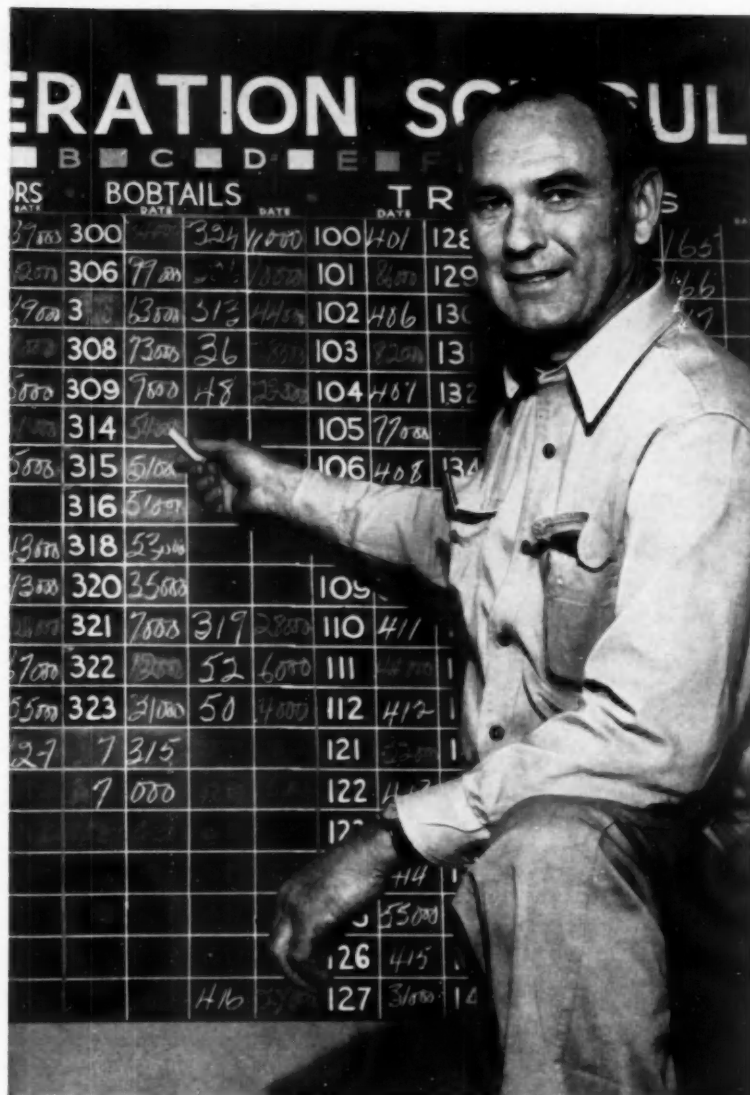
ENGINEER'S FIELD REPORT

PRODUCT RPM DELO Oil

STERLING TRANSIT CO.

FIRM Montebello, California

350,000 miles on RPM DELO before rebuilding



800-mile round trip between Oakland and Los Angeles is regular run for firm's big Kenworths and Internationals. Mr. Schuster makes frequent dipstick checks (above), reports make-up RPM DELO Oil for trip averages only 5 quarts. Older trucks use cleanable filters; newer units, replaceable cartridges. All use RPM DELO Oil exclusively.

Why RPM DELO Oils reduce wear—prolong engine life

- Oil stays on engine parts—hot or cold, running or idle
- Anti-oxidant resists lacquer formation
- Detergent keeps parts clean
- Special compounds prevent corrosion of bearing metals
- Inhibitor resists crankcase foaming.



For More Information or the name of your nearest distributor, write or call any of the companies listed.

Using RPM DELO Oil, Sterling Transit Co.'s 15 diesel tractors run an average of 250,000 miles before overhaul. "In fact, we get 350,000 to 400,000 miles out of them before engines are removed for rebuilding," reports Maintenance Manager Bill Schuster (above). "Regular oil changes are an important part of our preventive maintenance program. This color-coded chart indicates the mileage and condition of any unit in our 82-truck fleet...and these records show that RPM DELO Oil is doing a good job."



TRADEMARKS "RPM DELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA COMPANY, Denver 1, Colorado

Milwaukee's CD Trailer

The Milwaukee Civil Defense Administration recently took delivery of this mobile communications trailer from Highway Trailer Co., Edgerton, Wis. Delivery of a similar trailer is planned for the near future. Constructed of steel with oak floor and plywood lining, the trailers are 32 ft long. They are air conditioned and have reinforced roof to carry a ton of collapsible radar and radio antennae.



Increase **GAS MILEAGE**



Reduce **TRUCK MAINTENANCE**



Lengthen **TIRE LIFE**



Guard against **ACCIDENTS .**



by Equipping Your
Fleet with
**HANDY
GOVERNORS**



KING-SEELY CORPORATION

ANN ARBOR, MICHIGAN

WORLD'S LARGEST MANUFACTURERS OF AUTOMOTIVE GOVERNORS

7624

Product Recognition

Continued from Page 74

established through the use of a number of graphic elements:

- First came a distinctive background pattern of vertical stripes. The designers claim this is the most "eye-catching" of the basic design elements. The stripes lead into a characteristic colonial sign that symbolizes the colonial heritage of the company. (Colonial troops sought food and water at the Martin farm while transporting the Liberty Bell from Philadelphia to Allentown to escape the British. The historical Allentown road winds past what is now Martin's executive building, constructed in pre-revolutionary days.

- The country scene at the bottom of the Colonial sign serves as a base for all of the design elements and emphasizes the adjacent slogan "Bottled Fresh in the Country."

- The "Martin" logotype has been modernized to increase legibility and appears in cherry-red on trucks, ice cream signs and packages.

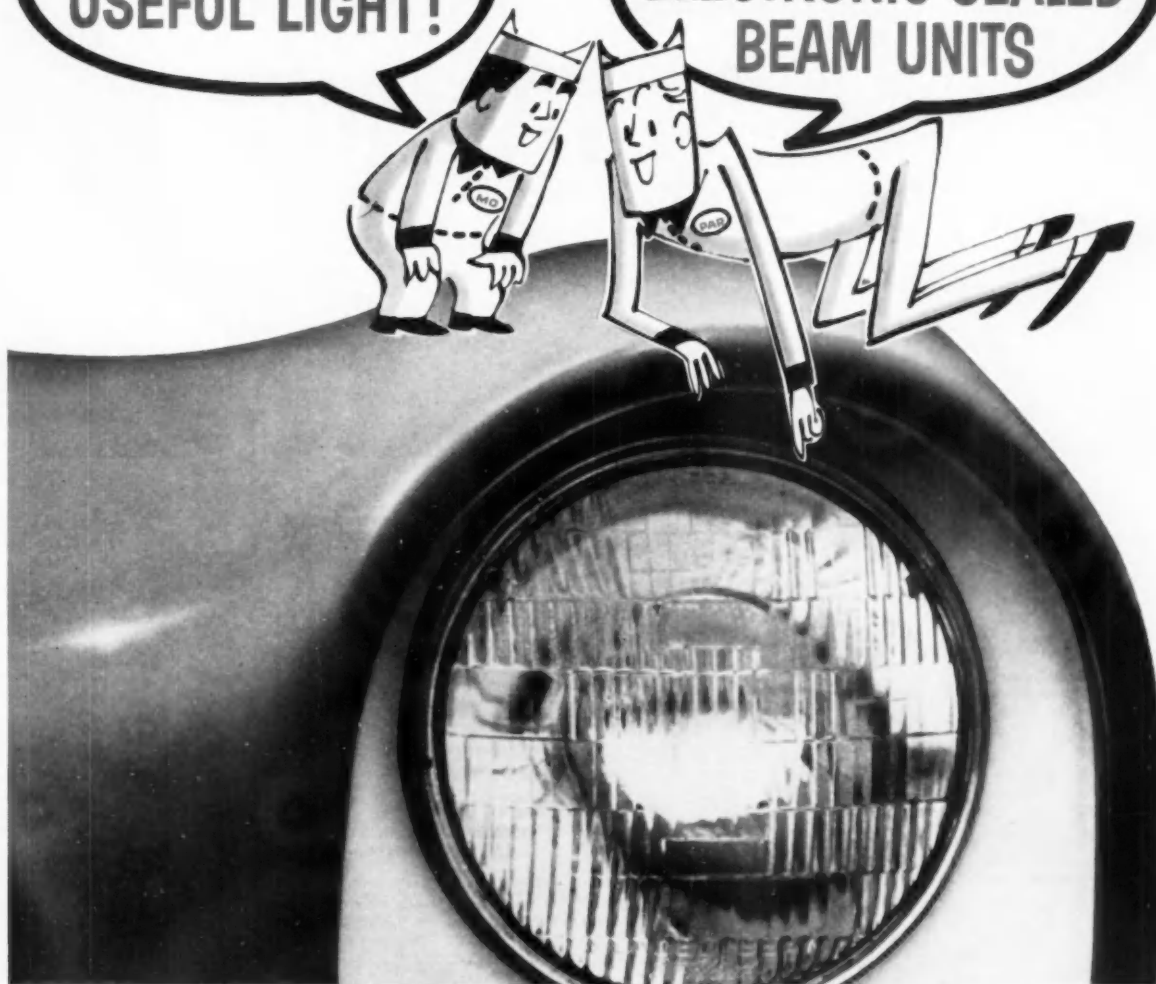
- Mint green is an important unifying element in the design. It underscores the "Made Fresh in the Country" theme. The striped pattern on the trucks and on the ice cream sign are also mint green. The color appears on each of the packages in combination with other colors which vary from package to package to identify the products.

END

Please Resume Reading Page 75

**25% MORE
USEFUL LIGHT!**

**MOPAR
ELECTRONIC SEALED
BEAM UNITS**



REDUCE GLARE, INCREASE SAFETY!

25% extra light, compared with old-fashioned sealed beams, is a mighty important efficiency and safety *plus* to you.

WITH MOPAR ELECTRONIC SEALED BEAM UNITS YOU GET —

- **Five extra watts** for that 25% more useful light
- **Less reflection** from fog, rain, sleet, snow
- **New beam pattern** to light the area that is most effective for safe driving
- **Less headlight glare** . . . less light dazzle . . . less driving strain—greater efficiency
- **Up to 80 feet more illumination** for greater car control

MoPar electronic sealed beam units are official, authentic Chrysler Corporation products, precision-made to highest

quality standards and factory-approved. Order from your MoPar wholesaler or your Plymouth, Dodge, De Soto, Chrysler or Imperial dealer.



MOPAR DIVISION ➤ CHRYSLER MOTORS CORPORATION
DETROIT 31, MICHIGAN

STOP

with...

DELCO LINED BRAKE SHOES
Made and assembled to original equipment specifications.



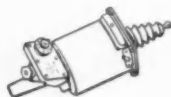
MASTER CYLINDER REPAIR KIT
All parts needed to put master cylinder in normal operating condition.



WHEEL CYLINDER REPAIR KIT
All parts necessary to put wheel cylinder in normal operating condition.

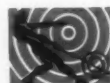


MORaine POWER BRAKES
Complete units and service kits for General Motors vehicles.



DELCO SUPER 11 IMPROVED WITH HTD MEANS MORE SAFETY, BETTER SERVICE FOR YOU BECAUSE IT . . .

- Surpasses S.A.E. and government specifications for heavy-duty hydraulic brake fluid!
 - Won't boil away or lose effectiveness when brakes get hot!
 - Flows smoothly and easily in coldest weather!
 - Is compatible with all brake systems' rubber and metal parts!
 - Is chemically inert, physically stable!
 - Is packaged in containers holding from one pint to 54 gallons!
 - Is available everywhere through the United Motors System and General Motors car and truck dealers!
- MORE SAFE STOPS—LOWER OPERATING COSTS!**



Moraine Products

Division of General Motors, Dayton, Ohio

GO

with...

MORaine-400 BEARINGS

Toughest automotive engine bearings ever made!



MORaine BI-METAL BEARINGS

Precision-built to original equipment specifications.



M-100 BEARINGS

Excellent fatigue resistance and longer life expectancy.



MORaine GAS FILTERS

Glass-bowl and pancake all-metal types assure dirt-free, lint-free fuel under all operating conditions.



LOOK AT THE VALUES MORaine GIVES YOU . . .

- A complete engine bearing line, with a bearing for every car, bus and truck replacement job!
 - Precision-made to extremely close tolerances, to handle higher bearing loads!
 - High embedability . . . good corrosion resistance . . . strong resistance to fatigue!
 - Quality that stands up through miles and miles of operation!
 - A convenient source of supply—readily available through the United Motors System and General Motors car and truck dealers!
- LONGER BEARING LIFE—LOWER OPERATING COSTS!**



Moraine Products

Division of General Motors, Dayton, Ohio

OFF THE
HIGHWAY...



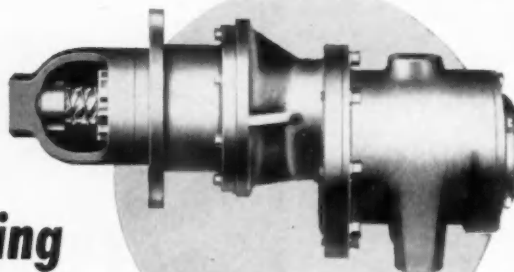
...ON THE
HIGHWAY

EXTRA PROFITS START

...with



air starting
motors



Reduce generator size and banks of storage batteries... cut electrical maintenance and costs... boost your payloads... with compact, lightweight Ingersoll-Rand Air Starting Motors. Get extra security of a sure start *every time*, regardless of weather conditions.

Let us show you the amazing savings fleet owners and contractors are enjoying today with these dependable units. There's one for any size internal-combustion engine.

Let's discuss the savings you can start enjoying right away.

- Interchangeable with electrical units
- Dependable Bendix-Drive
- Power unaffected by temperature extremes
- Motor can't burn out
- Use Air-Brake Compressor as power source
- Rugged, simplified construction

Ingersoll-Rand

11 Broadway, New York 4, N.Y.

Manufacturers' Literature

(See Page 44 for Fleetman's Library)

Guide to Better Welding, Form No. 8223, contains useful hints for welders on problems encountered on the job, a steel hardness guide and an electrode comparison chart. Free from Marquette Manufacturing Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.

Pre-heater Maintenance Manual deals with the regular inspection and servicing of KIM Hotstart electric preheaters for gasoline and diesel engines. Free from KIM Hotstart Mfg. Co., West 917 Broadway, Spokane 1, Wash.

Introduction to Packaged Power Brake Actuators describes the Talco brake actuator, an emergency braking system. The four-page bulletin shows diagram of system and illustrations of installed unit. Free from Talco Engineering Co., Inc., P. O. Box 683, New Haven, Conn.

Weatherhead Tool Catalogue, No. 6111, lists new line of tube working tools which company has added to its line. Illustrates and describes tools for flaring, burnishing, double flaring, cutting, bending and joining copper and steel tubing. Free from The Weatherhead Co., Customer Service Dept., 128 West Washington Blvd., Fort Wayne, Ind.

Terminal Operation, Bulletin No. ECR-431, shows how radio communications contributes to reduced terminal costs, increased capacity, faster service and greater sales. Free from General Electric, Electronics Park, Syracuse, N. Y.

Hobbs Engine Hour Meter, Catalog No. 600, describes the timing instrument which tells at a glance the hours and minutes of engine operation. For users of both diesel and gasoline engines. Free from John W. Hobbs Corp., Yale Blvd. and Ash St., Springfield, Ill.

Bendix Power Brake Service Parts, Catalog No. 9F, contains complete listing for Air-Paks, cylinder and chamber assemblies, Hydrovacs, Power-Vacs, Treadle-Vacs, vacuum pumps and valves. They are \$1.50 from Merchandising Manager, Service Sales Dept., Bendix Products Division, South Bend, Ind.

White Mustang Engines, 400 Series, folder is free from Sales Promotion Dept., The White Motor Co., Cleveland 1, Ohio.

Armco Steel Buildings, Portfolio No. SX-12756, provides data and suggested plans for complete line of steel buildings for the trucking industry. Free from Product Information Service, Armco Drainage & Metal Products, Inc., Middletown, Ohio.

Front End Loader and/or Shovel Rating, Form No. TR-151. SAE's report of its Construction and Industrial Machinery Technical Committee which describes a method for determining the average volume of an average material carried by the bucket of a front end loader. To members—35¢; to non-members—70¢. From Society of Automotive Engineers, Inc., 485 Lexington Ave., New York 17, N. Y.

Timken-Detroit Presents the New Lightweight Tandem, Form No. SP-5710, gives specifications of new driving tandem along with special features. Free from Rockwell Spring & Axle Co., Timken-Detroit Axle Division, Detroit 32, Mich.

Magic Eye Freeze-D-Tector Catalog lists features of testing devices for anti-freeze, batteries, and pressurized cooling systems and pressure caps. Free catalog from E. Edlmann & Co., 2332 Logan Blvd., Chicago 47, Ill.

Lincoln Cooltong Electrode Holder, Form No. SB-1361, describes features of Cooltong 300-400 holders and gives specifications and exploded view of device. Free from Lincoln Electric Co., Cleveland 17, Ohio.

Grote Accessories Catalog, Form No. A-2857, gives complete list of products from company's automotive truck division, including a digest summary of official lighting regulations for truck, busses, tractors, trailers and combinations. Free from Grote Mfg. Co., Bellevue, Ky.

'P' Series Power Brakes for Trailer Axles, Form No. SP-5703, describes Timken-Detroit's line of power brakes, including reports from users and specifications. Free from Rockwell Spring & Axle Co., Timken-Detroit Axle Division, Kenton, Ohio.

Air Filter Facts Slide Film gives complete history, development and technical data on Purolator's dry-type air filter. The 35-mm film strip comes in a kit with a 20-min long-playing record. Available for showing through regular Purolator supplier.

Hydrostarter, Form No. 6SA49, describes General Motors' starting system for diesel engines which eliminates maintenance costs of batteries, cables, magnetos and air compressors. Free from Detroit Diesel Engine Division, 13400 West Outer Drive, Detroit 28, Mich.



...the only electric power wrench... with automatic shut-off torque control

SIZE 5UT IMPACTOOL
WITH

TORQUE CONTROL

This selector knob engages the automatic shut-off device... the unique feature essential to true torque control. Yours at no extra cost!

No other electric impact wrench on the market gives you this modern, essential feature. Use it as a standard Impactool, with all the advantages of a multi-purpose tool. Add a Torsion-Bar attachment... engage the built-in selector knob... and you have the only positive Torque Control impact wrench available today. Buy complete now... or add the Torsion-Bar attachments later. Ask your I-R jobber for an obligation-free demonstration now!

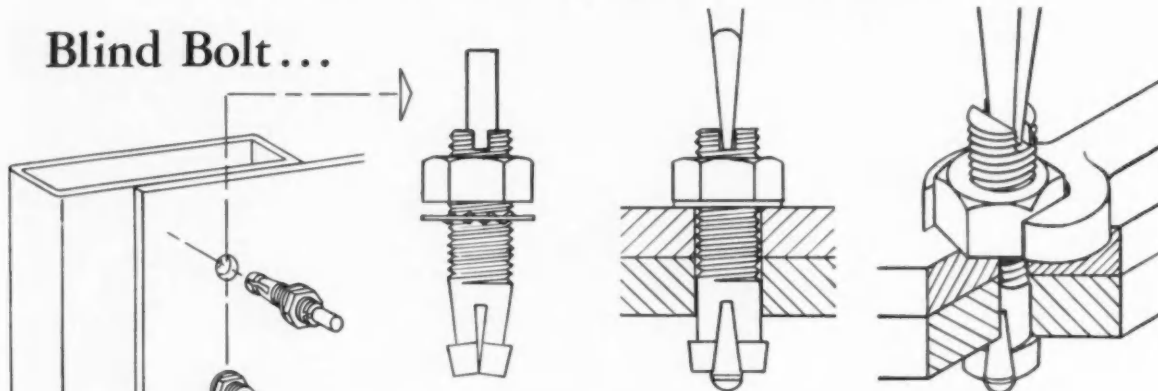
Ingersoll-Rand
11 Broadway, New York 4, N.Y.

18-546

Simplified Bolting and Riveting in Blind Applications

For fastener applications accessible only from one side of the work, you can now bolt or rivet without special tools...

Blind Bolt...



1.

This is the Southco "Drivebolt" Fastener. A nut is threaded on and the bolt is inserted from one side of the work.

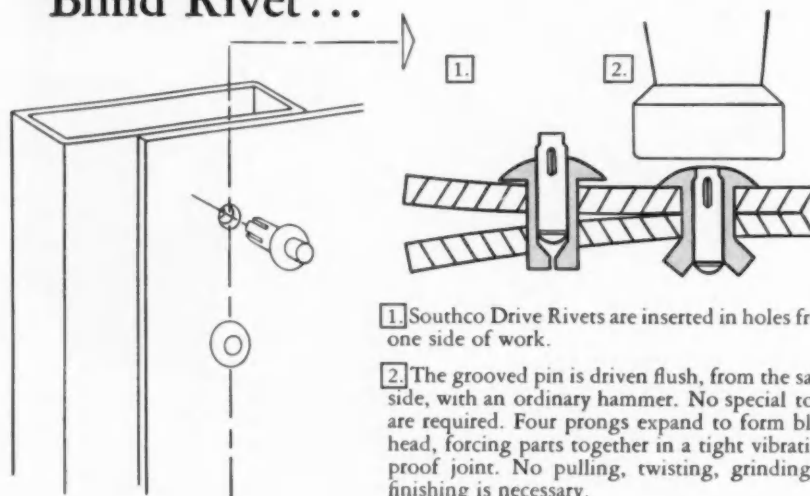
2.

The pin is driven flush, expanding a head on blind side of hole. Pin is then further depressed with screwdriver blade to clear slot.

3.

Working from open side, bolt is kept from turning by screwdriver, nut is tightened with wrench. Result—bolted strength achieved from one side of job.

Blind Rivet...



1.

1. Southco Drive Rivets are inserted in holes from one side of work.

2.

2. The grooved pin is driven flush, from the same side, with an ordinary hammer. No special tools are required. Four prongs expand to form blind head, forcing parts together in a tight vibration-proof joint. No pulling, twisting, grinding or finishing is necessary.

FREE!



Fastener Handbook

Send for your free copy of Fastener Handbook No. 7, just released. Gives complete engineering data on these and many other special fasteners. Fifty-two pages, in two colors.

Write on your letterhead to Southco Division, South Chester Corporation, 228 Industrial Highway, Lester, Pa.

SOUTHCO

FASTENERS

© 1956

LION



Grips hex nuts on two faces—presses on two corners.



NUTMASTER bears on four faces—CAN NOT burr corners.



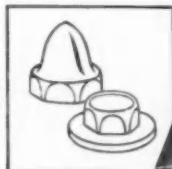
Grips square nuts on two faces—can burr corners badly.



NUTMASTER exerts pressure on three faces—no burrs.



NUTMASTER gets a firm grip on badly worn nuts.



NUTMASTER takes all shapes and styles with ease.

Here's the Sensational New **NUTMASTER**

New Britain
**PRESENTS THE GREATEST
OPEN END WRENCH DESIGN
IMPROVEMENT OF ALL TIME**

IT'S HERE! the revolutionary, European designed Open End Wrench... now **MADE-IN-AMERICA** by **NEW BRITAIN**... that makes your work easier! The powerful turning forces are applied *only* on the **FLAT FACES**, *not on the corners of nuts and bolt heads!* **NUTMASTER** exerts tremendous torque—far greater than the conventional, open end wrench—puts on the pressure where it can't burr or deform corners.

This radically new design moves, locks, or unlocks any nut or bolt, hex or square, without any jockeying for fit. The slender head works easier in close quarters—seats instantly, turns better—even on battered nuts and bolt heads.

Tool-wise mechanics will go for **NUTMASTER**—it's lighter and less bulky—with a positive grip that decreases slippage and skinned knuckles. And...there's longer service life—no flat, inner jaws to spread.

Available in most popular sizes, the streamlined **NUTMASTER** is precision forged of finest alloy steel, triple plate chrome finish. Ask your **NEW BRITAIN** Jobber to just let you handle it—try it out on his **NUTMASTER** Action Display. Brother, you'll buy it! The New Britain Machine Co., New Britain, Conn.



*NEED A New Britain HAND TOOL?
... PHONE YOUR JOBBER!*



New Britain

NEW BRITAIN • CONNECTICUT HAND TOOLS

WAUSAU

the complete line of....

HEAVY DUTY PISTON RINGS

for commercial and industrial applications



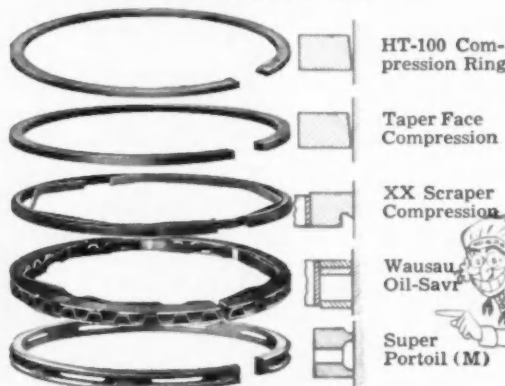
Chief of compression rings!

HT-100 From an exclusive alloy formula . . . the toughest, "performingest" compression ring of them all. Highly elastic, shock, heat and fatigue resistant.

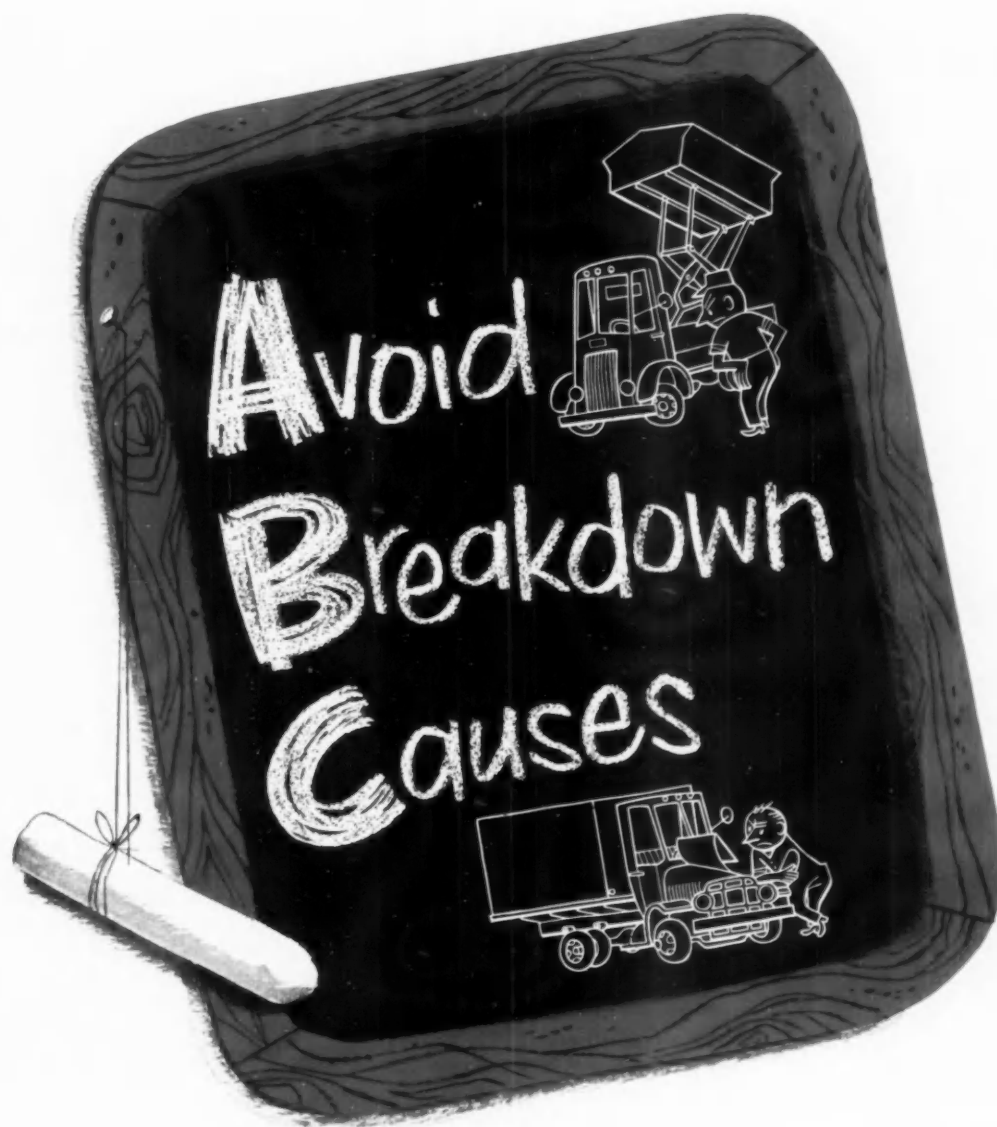
Wherever heavy duty piston rings are needed, WAUSAU has a custom made set specifically designed for the engine, for almost every application. These sets were developed exclusively for heavy duty service . . . to hold compression and control oil under the most severe operating conditions. You'll find over 50 different ring designs in the WAUSAU line developed to cure the eccentricities of the various engine models. WAUSAU's size range covers the smallest air cooled engine to the big diesels; buses, trucks, heavy transport vehicles, stationary engines; with *quality* built into every set. WAUSAU rings have won an enviable reputation . . . your assurance of acceptance and satisfaction wherever heavy duty piston rings are needed. See your jobber or write . . .

Sets for every condition . . . every engine

Typical of many Wausau Heavy Duty Sets is this HCM combination.



WAUSAU MOTOR PARTS COMPANY • Manufacturers • 2400 Eau Claire St., Schofield, Wis.



It's as simple as ABC with Socony Mobil's Correct Lubrication Program

Join the cost-conscious fleet owners who have discovered this efficient way to keep equipment on the road . . . out of the shop!

A. Famous quality products—*Delvac Oils*—for all gasoline and Diesel engines.

New Mobilube GX—Multipurpose-type Gear Lubricant—provides widest range of protection yet for axles, transmissions.

Mobilgreases—types and grades for all chassis parts, engine accessories.

B. Lubrication engineering service—Includes analysis of your fleet conditions . . . advice on lubrication schedules and inspection periods . . . services of expert lubrication engineers when necessary . . .

progress reports on benefits achieved. This complete service, plus our research facilities and 91 years of experience, is yours with Mobil.

C. Simplified P.M. system—This easy-to-follow system minimizes record keeping. You work with only a Record Folder . . . Work Sheet . . . Control Blackboard. We supply folders, work sheets—show you how to use them. You can practically eliminate breakdowns due to improper lubrication maintenance!

SOCONY MOBIL

Leader in lubrication for over 91 years



Correct Lubrication

**A proved program
to reduce fleet maintenance costs!**

SOCONY MOBIL OIL COMPANY, INC., and Affiliates: MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

Chevrolet's New Trucks, Engine . . .

Continued from Page 89

are now standard on all truck engines. Oil control rings for the 261-cu in. 6-cyl engine have, in addition, chromium-plated rails. Another improvement on this engine is the use of Stellite-faced exhaust valves with welded-on

hard tips, used in combination with valve rotators. It too has the drilled-hole oil supply to the valve rocker shaft.

Changes have also been made in the 283-cu in., V-8 engine. It's available in a light and two heavy

duty versions. The light duty model has an 8.5 to 1 compression ratio, replaces the 265-cu in. engine, now discontinued.

The two heavy duty versions of the 283 engine have Stellite-faced exhaust valves with welded on hard tips. They operate in induction-hardened seats, are used with valve rotators. Oil control rings have chrome plate three times as thick as before.

In the cylinder head to reduce spark plug temperature, two 3/16-in holes have been drilled on each side of the spark plug boss with water fed from a hole in the top surface of the block. This is said to reduce spark plug gasket temperature as much as 170°F.

In both 6-cyl and V-8 engines, one-piece fan shroud permits a single radiator mounting for engines in the 30, 40 and 60 Series. With the optional V-8 in the 30 Series, Chevrolet supplies a fan ring mounted directly to the radiator frame. The radiator bulkhead, used at the 6-cyl engine position, is common to Series 30, 40, 60, 80, and 100. Radiator supports for Series 50, 70, and 90 are center-mounted as last year.

Engines in Series 60 trucks with 4 and 5-speed transmissions are equipped with a new 19-in. 5-bladed fan with curved tips. When the Powermatic transmission is used, the fan is 20-in. diameter with curved tips. All Series 70, 80, 90, and 100 trucks have dual exhaust systems.

The addition of a second drive range on the Powermatic transmission provides still greater flexibility in downhill speed control, makes the hydraulic retarded available in 5th gear as well as 2nd, 4th and 6th. Another improvement is the adoption of a flexible shaft replacing the linkage between the selector lever and transmission. To suit the extra power-torque output of the new V-8, Series 90 and 100 models are provided with the Spicer heavy duty five-speed transmission as standard equipment.

Full air brakes are available as an option on Series 70 through (TURN TO PAGE 134, PLEASE)

HIGHER OCTANES, INCREASED COMPRESSIONS, Require BETTER Valves...



rmc VALVES

BETTER for the following reasons:

ENGINEERING KNOW-HOW
Serving OEM Since 1908

BI-METAL CONSTRUCTION
Heads one Steel Alloy—Stems Another—**rmc** Specialized Specifications

ROTO MECHANISMS
Both Positive and Release Types

STELLITE FACE
Longer Life—Heavy duty applications

HEAT BANDS—Specialized Applications—
Around VALVE head prevents burning



This Super Duty Seal on every **rmc** Heavy Duty Valve Box.

SOLD by Leading Automotive Replacement Parts Jobbers

WAREHOUSED in Most Principal Cities

INSURE A BETTER JOB WITH **rmc** VALVE TRAIN PARTS



RICH MANUFACTURING

BATTLE CREEK
MICH., U.S.A.

BASIC VALVE MANUFACTURER
FOR ORIGINAL EQUIPMENT
SINCE 1908



Hendrickson Model BD-270 Tractor available with 6-cylinder P&H Automotive Diesel power.

Have you considered all the sources of Diesel power?

Take a quick review of your present diesel power. Are you fully "up" on the latest technical developments that are making the P&H Diesel the most talked about engine in the industry today—that are making possible lower operating costs, increased payload capacities, better road performance, less off-the-highway time for servicing and repairs?

Because of modern aluminum design, heavy-duty P&H Diesels are highly efficient—deliver far more horsepower per

lb. of weight than any other diesel. Mileage has exceeded 7 miles per gal. carrying 60,000 pounds G.C.W. Weight savings have made possible increases up to 1,000 lbs. in payload capacities.

These and other P&H innovations, such as the new mushroom connecting rod and piston assemblies, are making many old timers in the field reinventory their thinking. For complete information write Dept. 432-A, Harnischfeger Corporation, Milwaukee 46, Wisconsin.

HARNISCHFEGER

DIESEL ENGINE DIVISION
Crystal Lake, Illinois

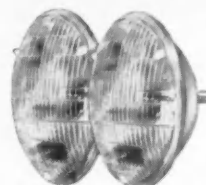


TWICE THE LIGHT*

300

Feet Ahead—

with a pair of General Electric
All-Weather Headlamps!



COMPARE the powerful lower beams of the new G-E *All-Weather* Headlamps with *any* older type of sealed beam, and you'll be able to see the difference. *General Electric *All-Weather* Headlamps give twice as much light on the lower beam 300 feet ahead on *your* side of the road. Why 300 feet? Because that's where objects *should* come into view (and *do* when you have new General Electric *All-Weather* Headlamps—properly aimed, of course).

SEE BETTER IN FOG, RAIN, SNOW—General Electric *All-Weather* Headlamps have a special lower beam filament shield that blocks uncontrolled upward light. Older types of sealed beam lamps let this upward light strike moisture particles and bounce back in your eyes.

HIGH BEAMS REACH FAR AND WIDE IN CLEAR WEATHER—In addition, the G-E *All-Weather* Headlamps have a powerful upper beam that does more than reach for distance. It also has *surround light* that gives a panoramic view of the road *and* its surroundings. You see trees, poles, etc.—even side roads—and that means extra safety. Of course, any headlamps have to be aimed right to deliver all their rated light, so when you change over your fleet to pairs of new General Electric *All-Weather* Headlamps, be sure you have 'em aimed. It's easy with *these* headlamps because of the Aim-right Gizmos that help speed-up the aiming job with the aid of a mechanical aimer. General Electric Co., Miniature Lamp Dept., Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product

GENERAL  ELECTRIC



OLDER TYPE SEALED BEAMS—At the critical seeing point, older types of sealed beams just don't have the light output. Night driving is much more hazardous.



G-E *All-Weather* HEADLAMPS—Same distance, same darkness—different headlamps. Note how much better you can see objects; think how much safer you can drive.



N. B. Waxler, Maintenance Supervisor, National Automotive Fibres, is shown with Jim Compton, Cooper Rep., as they set up "the record" for two new Cooper Road-Master Extra Mile truck tires.

Cooper Road-Masters average 125,000 miles, cut truck tire costs below 1 mill per mile

National Automotive Fibres uses 30 pieces of equipment to haul sixteen (16) ton loads of semi-fabricated door panels and carpet to car manufacturers and their assembly points all over the country.

Deliveries must comply with production line timing. Trucks must almost always roll at maximum allowable speeds from plants located in Ohio, Michigan and New York. Yearly mileage tops the 1 million mark. Tire cost is an important factor in keeping National Automotive Fibres competitive. That is why this

automotive supplier's truck fleet is equipped with Cooper Road-Master Extra Mile tires. These tires average 125,000 original miles on drive wheels, deliver even higher mileage on front and trailer wheels. Cooper Road-Master Extra Mile tires have cut costs below 1 mill per mile for this operator.

\$1 Million Marvel Pays-Off

The industry's newest and most advanced nylon cord processing mill is one reason why Cooper Road-Master tires

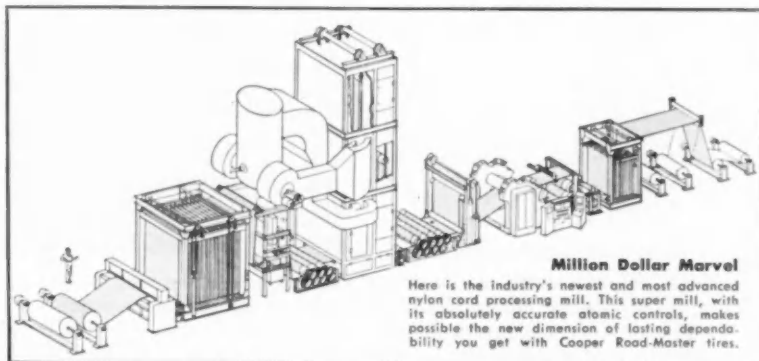
deliver more mileage at lower cost for National Automotive Fibres.

Aptly named the million dollar marvel, this super mill adds the new dimension of lasting dependability to nylon and rubber. The pay-off for truck operators like yourself is a practically damage-proof tire body that delivers phenomenal original mileage, up to 4 and 5 bonus recaps.

And remember: The new dimension of lasting dependability you get with Cooper Road-Masters is in addition to the extra protection made possible by Cooper Shock-Guard construction.

Call and Save

The advantages of lower truck tire costs and higher payload profits are as near as your telephone. Call your Cooper truck tire dealer, or write us for full details about Cooper Road-Master tires. Both nylon and rayon types available in a complete range of prices. Cooper Tire & Rubber Co., Findlay, Ohio.



... miles ahead

There's a
SPEED WASH
FOUNTAIN BRUSH
to fit every
washing need

**FOR LARGE TRUCKS
and BUSES**

No. 240 Oblong—
11" back, full
60" handle



**FOR SMALL TRUCKS—
PASSENGER
CARS**

No. 250
Round—5½" dia.
back, full 60" handle



\$12.45 ea.
Either Style

More trucks, buses, trains are washed with Speed Wash Fountain Brushes than any other. And no wonder! Look at these features — soft, resilient bristles (50% nylon — 50% horsehair) can't mat, tangle; exclusive perma-set fastened tufts cannot come out; steel back is surrounded by mar-proof rubber bumper. Built to outlast ordinary brushes, Speed Wash is fully guaranteed. Order yours today!

MILWAUKEE DUSTLESS BRUSH CO.

530 North 22nd St., Milwaukee, Wis.

Please ship the following:

Quan.	No.	Item
	240	OBLONG SPEEDWASH
	250	ROUND SPEEDWASH
NAME		
ADDRESS		
CITY STATE		

Chevrolet . . .

Continued from Page 130

100 models, with either disc or cast wheels. Full air brakes also are available for tandem axles in both 80 and 100 Series with standard cast wheels. Series 90 and 100 models now have an 18,000 lb rear axle as standard with rear brake drums increased to 16-in. diameter.

Improvements have been made in the "Twin Action" rear brakes which are found on all Chevrolet rear axles rated at 15,000 lb. First is a sliding pivot anchor with a flat face butting against the brake show web. Second, brake show return springs have redesigned ends, attach to the rim rather than the flange of the show. Third, all brake show return springs are of equal length.

New power steering will be available in the 90 and 100 Series with a higher capacity hydraulic pump mounted forward on the engine, driven by belt.

As mentioned earlier, the 18,000-lb rear axle now is standard equipment on the 2½-ton series. Standard gear ratio is 7.67 to 1, with 7.17 to 1 optional. New high ratio 2 speed axles will be available for both 16,000 and 18,000-lb Eaton models. The 16,000-lb Eaton axle offers ratios of 6.50 and 9.04 to 1, and 7.17 and 9.77 to 1. Ratios on the 18,000-lb Eaton axle are 6.50 and 8.87 to 1, and 7.17 and 9.77 to 1. An oil-wetted air cleaner mounted under the dash supplies air to the actuating unit of all vacuum-operated two-speed axles.

The 9000-lb front axle, formerly available only in tandem models, now is offered for all Series 90 and 100 models, except school bus chassis.

Four-wheel drive trucks now are available with an optional front driving axle. Equipped with locking and unlocking type hubs, the front wheels can be free to rotate independently of the axle shaft.

END

Please Resume Reading Page 90

HUNTER

Transport Heating
and Refrigeration

CAB HEATERS

safe, sure heat
at low cost
for gas or diesel rigs

- shirt sleeve warmth in coldest weather
- gasoline-burning, thermostatically controlled
- operate independent of vehicle engine
- eliminate costly engine idling
- sub-zero starting, unfailing combustion
- conform to all ICC regulations
- economical, compact, easy to install

MODEL UH-47

Write for descriptive literature and prices
HUNTER MANUFACTURING COMPANY
30525 AURORA ROAD, SOLON, OHIO

Time Sets Maintenance Pace

Continued from Page 93

in the hands of an experienced crew has so extended equipment life that shops are finding the quarterly inspection can be extended to 8-month intervals. It is probable that the two shorter cycles will be stretched to 10 days and six weeks.

Growing effectiveness of the PM program is proven at the Tulsa shop by the improved condition of equipment they receive from the stations for transfer. When a unit is transferred permanently from one station to another it is run into Tulsa for complete rehabilitation. The new assignee must receive equipment in "like new" condition.

Up until two years ago, the average cost of reconditioning units was \$1500. Now, although equipment increases in complexity, that cost has dropped under \$300 per unit. This reconditioning, in-

cidentally, will be done in the new base shops (Sept., page 136) as fast as they are completed, eliminating the long run into Tulsa from some stations.

The weekly PM check is the flexible element of the schedule. On the day a unit is scheduled for inspection it should automatically be the last unit sent out. If it has to be used that day, a unit scheduled for the following day is inspected instead, to save time for the first unit as soon as it returns from the job. If still on the job the second day, the weekly inspection is skipped for that week. If a unit is not available when scheduled for monthly or quarterly inspections, the inspection must be made up as soon as possible. To do this, weekly inspections on

(TURN TO PAGE 138, PLEASE)

HUNTER

Transport Heating
and Refrigeration

LP GAS CARGO HEATER

**Positive
Protection for perishable cargos**

- exclusive new jet-type burner forces high volume of clean heated air to every corner of cargo space
- available in two models: UH98 for permanent installation; UH99 self-contained portable unit
- operates for 24 hours at top heat — at very low cost — 16,000 BTU per hour
- completely independent of vehicle engine and battery
- accurate thermostatic control — no "hot spots" — no "cold spots"
- no moving parts — no maintenance problems
- safety pilot — meets all ICC safety regulations
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MODEL UH-99



Write for descriptive literature and prices
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what's the BIG NEWS in TRUCK TIRES

The big news in truck tires—as in all tires—is, of course, **TUBELESS!** The tubeless tire answers a definite need for more efficient and economical fleet performance. It runs cooler, lasts longer—reduces maintenance, saves time and money.

INSURE THESE SAVINGS WITH PROPER SERVICE

Because of the extra rigidity and heavy beads built into new, large tubeless truck tires, it is *extra* important to use RuGLYDE Rubber Lubricant when mounting and demounting. RuGLYDE insures faster, safer, easier tubeless tire changes . . . won't cause rust . . . insures against damage to the air seal areas. Insures perfect bead seating, and RuGLYDE'S exclusive "Controlled Friction" action prevents after slippage.

Use RuGLYDE in the handy RuGLYDE Service Kit for best results. Write for details.



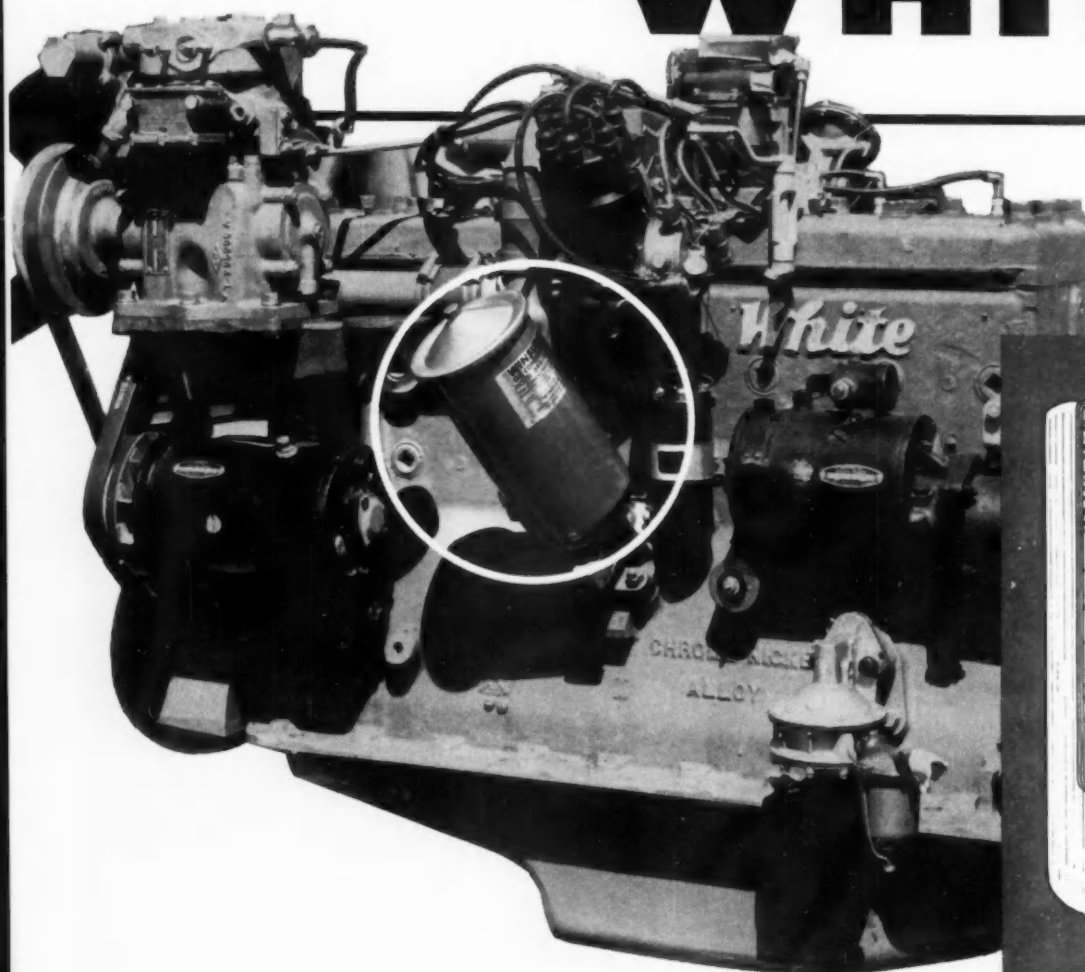
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AN **AGs**
PRODUCT

WINSLOW

now standard

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full-flow oil filters equipment on TRUCK engines

An Outstanding Combination For Performance and Dependability

The CP* Principle

Winslow patented CP* (Controlled Pressure) Elements are designed to continuously self-adjust the pressure within the filter and allow for a full stream of filtered oil from the filter without opening by-pass valves. This is accomplished through the dual flow capacity, with two types of material, as illustrated.

White Motor Company now provides truck operators the tremendous economies of *heavy-duty* full-flow oil filtration, another forward step in the outstanding record of White performance and dependability. For true full-flow oil protection, White selects Winslow Filters, holders of the original full-flow patents and originators of the exclusive CP* (Controlled Pressure) Filter Elements. Winslow Filters are now standard equipment on White Truck Gas Engines.

Years of field tests . . . including engines that have operated more than a million miles . . . laboratory tests . . . that prove longer engine life, longer efficient oil life and longer element life. Winslow's exclusive element design . . . the acceptance of Winslow Lubricating Oil Filters throughout industry . . . all demonstrate their important contribution to White Trucks.

First for Aircraft, Too



Winslow provides White owners the same CP* filter elements that are used for most commercial aircraft engines. These elements have CAA certification and provide the first effective lube oil filtration for airline equipment.

MANUFACTURING COMPANY

4069 Hollis Street • Oakland 8, California

... Maintenance Pace

Continued from Page 135

other vehicles will be omitted if necessary.

Where a weekly inspection has to be skipped, the equipment operator is expected to catch up on as much of it as he can during odd moments in the field.

All inspections are made jointly by the equipment operator regularly assigned to the unit and either the maintenance supervisor or a mechanic. They fill in an "equipment inspection guide" (shown in center on page 92), which is signed by both men. Two spaces are provided on each line of the check-list for the inspector to mark either "OK" or "need attention". Space at the bottom on each side of the sheet

is provided for expanded remarks about items needing attention. Repairs are scheduled immediately. In case of major repairs, the station manager is consulted to determine when the unit can be spared.

First step in every inspection is to warm up the engine and make a short test run. The equipment operator accompanies the inspector on this run. During and following the inspection, the operator carries out his part of the actual servicing. A 10-page mimeographed instruction guide, prepared by headquarters staff specialists at Tulsa contains detailed instructions.

The equipment operator is required to spend some 16 hours a week of PM on the piece of equipment he is working with. In addition, after the job is finished, he fills out a "maintenance request" form (at bottom on page 92) just as soon as he has rigged down, loaded and pulled out of the immediate well area. This is done while he still has the operation of the unit fresh in his mind. Everything in which the performance was found wanting is listed on the form, including leaky valves, bad unions, leaky packing, power loss, etc.

Also under normal circumstances the operator is responsible for washing and steam cleaning his unit. He also does the touch-up painting as soon as needed, and replaces the reflector tape on the back if damaged. A Dowell trademark is the bright orange and black paint job. The back of the unit is usually black with two-inch stripes of orange reflective tape running diagonally across it.

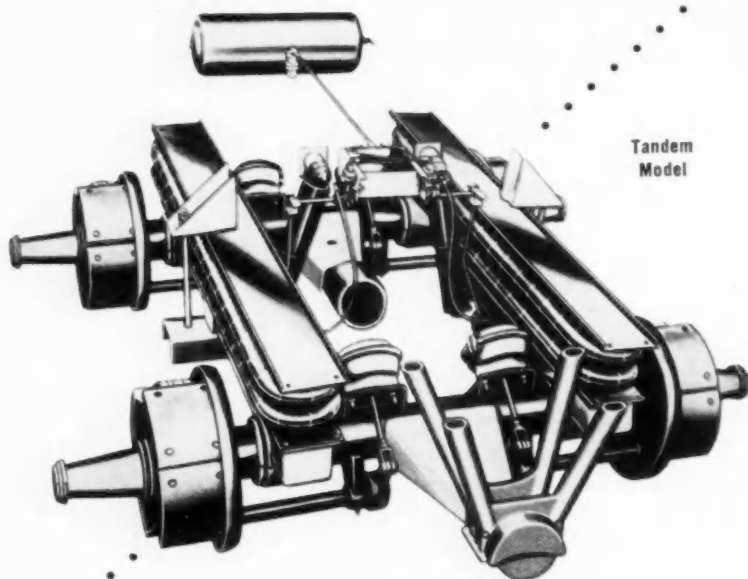
END

Please Resume Reading Page 96

Freight Loader: "Gee, boss, I was sorry to hear about your uncle getting killed. How did he lose his life?"

Terminal Manager: "Tank you, Sam. Uncle Jake was a tight-wire walker with a circus. Last Wednesday night, he was tight and the wire wasn't."

HAVE YOU HEARD THE STORY?



about YOCAR AiRide?

This is the product that fleet-owners say—

"Saves me maintenance costs"

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If you haven't heard the story, contact us soon—
it's a good one!

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Manufacturers of Hoobler self-steering widespread tandems

YOUNGSTOWN STEEL CAR CORPORATION

NILES 6, OHIO



Get your B&D Vacuum Cleaner now...pay out of profits!



Use it for wet or dry upholstery cleaning. It gives you an important extra you can sell your regular customers.

Service Stations: offer it as extra service. Gets customers out of their cars. Gives you the chance for accessory and lube sales.



Saves time and work around shop or station, too. Reaches everywhere, picks up wet and dry litter to keep your place neat, attractive.

Swiftly Service says: Get your tool back on the job in a hurry with fast, accurate repairs at your local B&D Factory Service Branch.



Own this **POWER-BUILT** unit
for as little as **\$1500** per month!

Pay-as-you-go—with profits! That's the deal you get with the B&D #65 Vacuum Cleaner. You can have it now. Use it to cash in on cleanup jobs. Then pay for it later out of the profits it has made!

And there's plenty of profit in jobs this Power-Built B&D Cleaner can do. Use it as a wet or dry cleaner—it holds up to $3\frac{3}{4}$ gals. wet or $\frac{7}{8}$ bushel of dry material. Its $1\frac{1}{4}$ hp motor makes it a powerful blower too. It's equipped with a super-flexible, accordion-type hose that stretches to a full 15 ft., and extra-large wheels give it complete mobility.

Find out how you can own your B&D #65 Vacuum Cleaner for as little as \$15.00 per month. See your B&D distributor or write **THE BLACK & DECKER MFG. Co., Dept. 5410, Towson 4, Md.** (In Canada: P.O. Box 278, Brockville, Ontario).



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Quality Electric Tools—Power-built to last



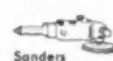
Drills



Impact Wrenches



Hammers



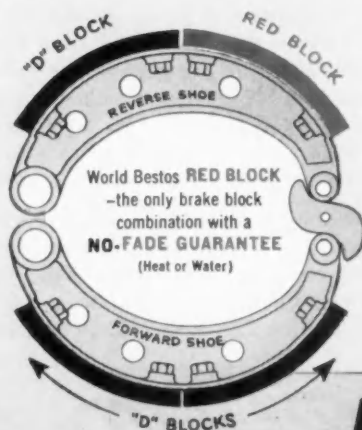
Sanders



**"We depend on
World Bestos **RED BLOCK**
for **GREATER SAFETY...**
at lower brake cost per mile"**



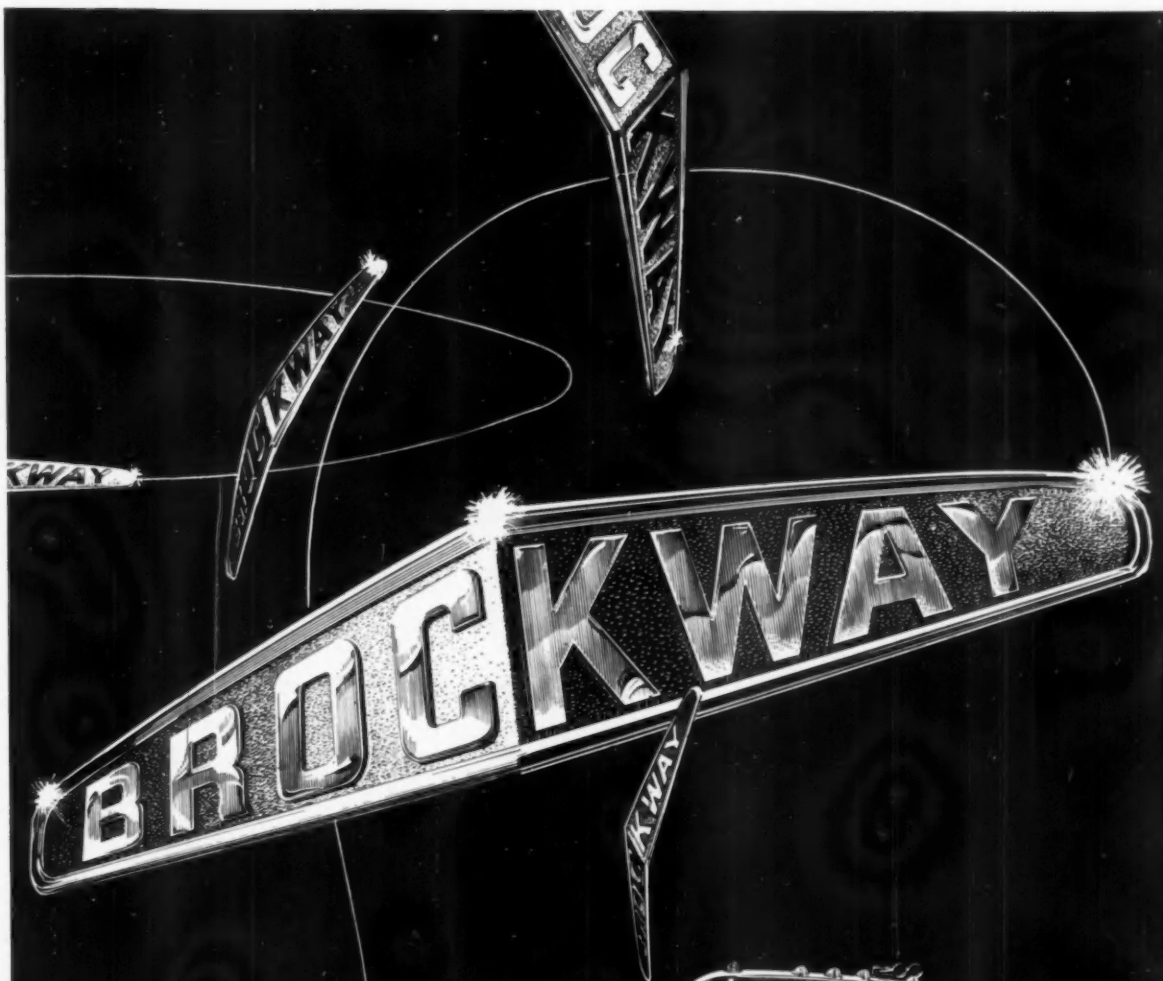
Mr. Harold Ward, President, and
Mr. Alvin Fitzsimmons, shop superintendent,
WARD TRANSPORT, Inc., Pueblo, Colorado



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. . . and savings on drum replacement.
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WATCH OUT FOR BROCKWAY!

It's roaring into tomorrow with new plans... new energy... all on top of what the Brockway name has come to mean... a proven truck, custom-built to meet individual requirements.



A Living Legend

of the Highways for 45 years!

BROCKWAY TRUCKS

BROCKWAY MOTOR TRUCKS, CORTLAND, N. Y.

DIVISION OF MACK TRUCKS, INC.

Too Much Diesel Smoke . . .

Continued from Page 83

seals and over-fuel the engine. Improperly adjusted injectors or injector racks will affect the type and pattern of the fuel spray which is forced into the cylinder.

If the injector timing is not within the recommended

specifications, it can cause smoky exhaust. Late injector timing also reduces the horsepower output of the engine which causes additional overloading. Moreover, it reduces the time interval the fuel has to burn in the cylinder which also results in engine smoking.



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GENUINE
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Repeat business is the foundation on which service profits are built. One of the surest ways to keep customers coming back time and time again is to use only genuine parts in your repair work. When you service Bendix* Drives, be sure to use only *factory new* Bendix Drives and Parts. Your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor. *REG. U.S. PAT. OFF.

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Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

Bendix
AVIATION CORPORATION

Plugged injector spray tips cause an uneven distribution of fuel within the cylinder resulting in improper mixing of fuel and air, causing poor combustion and excessive smoking. Any deflection of the fuel spray that allows fuel to contact the piston, crown, liner, or cylinder head will lower the temperature of the fuel below its combustion point and cause incomplete burning of the fuel. Fuel spray deflection is caused by incorrect protrusion of the spray tip into the cylinder, or enlarged or partially plugged injector spray holes.

The greater the amount of air that is admitted to the cylinder, the more complete the fuel combustion will be. On the other hand, any restriction in the air intake system, or any engine condition that allows air to escape from the cylinder before the fuel is injected, may result in incomplete combustion, excessive exhaust smoke, and lost power.

The most common cause of a restricted air supply is dirty air cleaners. The function of the air cleaners, of course, is to keep dirt and dust from getting into the engine with the intake air. However, if the dirt trapped by the air cleaner is not removed before it begins to clog the air cleaner screens, the amount of air that can get into the engine will be restricted. Any restriction in the center tubes of cleaners or connecting air hoses will also reduce the supply of air to the engine.

Air blowers must also function properly if the engine is to be furnished with sufficient air to prevent engine smoking. If they become worn to the point where they lose their efficiency, the air-fuel ratio in the cylinders will change and the mixture will be too "rich." This, of course, will result in engine smoking.

Even though a sufficient supply of air is delivered to the engine, however, this air must be retained in the cylinders until the entire charge of fuel is burned if complete combustion is to be had. Since the air is highly compressed in the cylinders during the piston's compression stroke, the engine must be
(TURN TO PAGE 146, PLEASE)



First and Foremost

FOR HIGH COMPRESSION ENGINES

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- Performance proven . . . the best answer to the need for stronger, tougher gaskets for modern high compression engines.
- For replacement trade and original equipment, FITZGERALD Gaskets have stood the test of time since 1906.
- Sold throughout the world.
- The name "FITZGERALD" stamped on every gasket is your guarantee of satisfaction.

GREASE RETAINERS • CORK GASKETS • FITZ-RITE TREATED FIBER GASKETS
FOR OIL, GASOLINE AND WATER CONNECTIONS
COMPLETE SETS FOR MOTOR REBUILDERS

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SINCE 1906



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Even Steam Cleaners



"404" LOW-TENSION CABLE

Stranded Copper conductor covered with tough coat of Packard "404" plastic. Small diameter, highly flexible and wear resistant.



"440" IGNITION CABLE

Long the leader, this Packard-developed high-tension cable continues to be used on more vehicles than any other except those using Packard TVRS.



TELEVISION-RADIO SUPPRESSOR CABLE

This Packard exclusive suppresses radio and TV interference and is original equipment on millions of vehicles.

COMPARTMENT CABLE can't harm it!

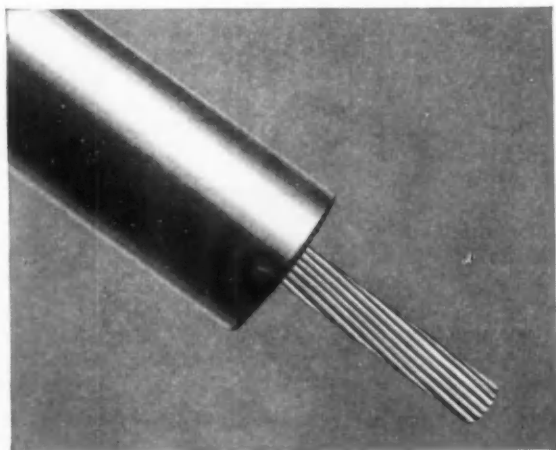
Here is a compact, highly flexible low-tension cable that is practically immune to wear.

Developed by the research and engineering departments of Packard Electric, this cable is insulated with a tough coat of special plastic that withstands heat, oil, steam cleaning com-

pounds and other deteriorating conditions. It's designed for the toughest going.

Engine Compartment Cable is a Packard exclusive and is one of the many reasons why Packard is the first choice of original equipment and replacement users.

Another rugged performer... Packard "SUPER-DUTY CABLE"

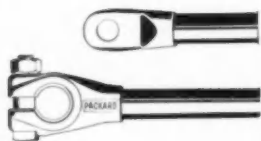


Designed for exposed wiring requirements. Special tough plastic insulation has extra resistance to wear, knocks, and weather conditions. Get the facts today on how this and other Packard Cables can cut your operating cost through longer service life.

Whatever your cable requirements, deal with the world's largest producer of automotive cable—Packard. It's the original equipment line that is used more than all others combined. Available everywhere through The United Motors System.

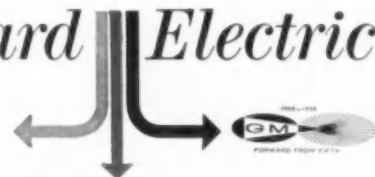
BATTERY CABLES

Special design delivers full starting power. Provides extra flexibility and strength. Additional features at no extra cost, make replacement easier, deliver top electrical performance.



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"Live Wire" division of General Motors

Advanced Technology
demands
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**LUBRICATION
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509
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**THE FINEST
MULTI-PURPOSE GEAR LUBRICANTS
AVAILABLE ANYWHERE!**

To Keep Pace With—

- ... new gear designs
- ... greater tooth pressures
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- ... high viscosity index
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- ... performance **TESTED AND PROVEN** to withstand the heavy pressure and loads imposed on modern differential gears.

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THE MOST RIGID STANDARDS FOR
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**LUBRICATION
ENGINEERS, INC.**

FORT WORTH, TEXAS

Industrial Lubricants for Industrial Equipment

Too Much Smoke

Continued from Page 142

in good mechanical condition to keep this air from escaping. Inlet or exhaust valves that do not seal properly will permit this compressed air to leak out of the combustion chambers. Badly worn pistons, piston rings, or cylinder liners will allow this compressed air to escape from the combustion chambers to the engine crankcase during the compression stroke.

Engine smoking caused

by excessive oil getting into the combustion chambers may not necessarily result from a faulty fuel system. The same engine conditions that allow air to escape may permit excessive lubricating oil to be drawn into the cylinders. Any excess lubricating oil in the cylinders will, of course, tend to over-fuel the engine. Moreover, this heavier oil is less likely to burn completely and thus is sure to cause excessive engine smoking.

Lubricating oil can also gain entry to the engine's combustion chambers through the air intake system. Engine oil from air cleaners in which the oil is at too high a level from being overfilled, or displaced by sediment in the sumps may be "pulled-over" by the air blower. Defective air blower oil seals may also allow lubricating oil to be drawn into the air system by the blower.

The third basic cause

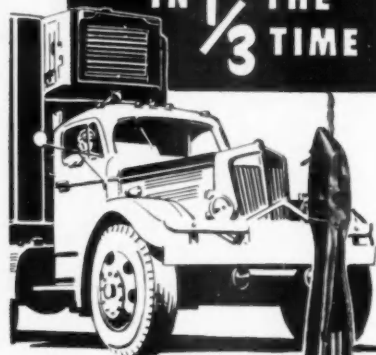
of engine smoking is a low engine-operating temperature. The combustion temperature of the fuel must be maintained after it starts burning if it is to be completely burned. A low temperature of the metal parts that make up the combustion chamber will cool the burning fuel below its combustion temperature.

In order to maintain the correct engine operating temperature and prevent engine smoking, the cooling system must function properly. When the engine temperature gage indicates a low operating temperature, the thermostats, thermatic

(TURN TO PAGE 150, PLEASE)

**SAFETY - WIRE
YOUR TRUCK
TRANSMISSIONS**

**IN 1/3 THE
TIME**



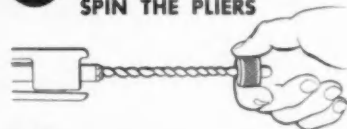
Hard to reach spots are a cinch to safety-wire with a Robinson. The 3 way tool (plier, cutter, twister) stops skinned knuckles, serves a dozen ways to speed maintenance time.

Robinson quality is long established in the free world's major aircraft and defense industries. Unconditionally guaranteed . . . just \$15.50 each.

1 GRIP THE WIRE



**2 PULL THE HANDLE TO
SPIN THE PLIERS**



3 THE WIRE TWISTS



Automatically

GET ALL THE FACTS TODAY

If you will tell us the type of safety wiring you do, we will recommend the right Robinson twister for your job. No obligation.

Write today to Ralph C. Robinson Company, Inc., Dept. C, 2516 Crosby Way, North Sacramento 15, California.

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**SAFETY-WIRE
TWISTERS**

Now! A *Snap-on* Tool Chest assembled to your order



Snap-on KR-360 Triple-Unit Tool Cabinet
\$17.10* down \$3.45 per week

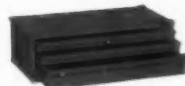
New Changeable Drawer Combination

KR-58 Tool Chest
\$58.95*
26" x 12" x 14" high



This new *Snap-on* tool chest with changeable drawer combination actually lets you design your own tool chest. You can select all deep drawers, all shallow drawers or a combination of deep, shallow, and medium-depth drawers — get just the right combination for your own particular tools. And you can make future changes to fit your needs.

KR-421 Drawer Section
\$31.65*
26" x 12" x 8" high



The new *Snap-on* drawer section is also available with the changeable drawer feature. Two shallow drawers can be substituted for the deep drawer or a deep drawer substituted for the two shallow drawers.

KR-352 Roll Cab
\$74.50
26 1/4" x 18" x 30" high



*Slight variation in price depending on drawer selection.
All prices subject to change without notice.

Get it now on Snap-on's easy payment plan

You can get the new chest, new drawer section and the roll cab individually, as a complete unit, or in any two-way combination. Any or all are yours on *Snap-on's* easy payments. Ask your *Snap-on* man for full details.

The *Snap-on* roll cab gives you a tool chest on wheels. And you get all the built-in quality of *Snap-on* chests — heavy-gauge electrically welded steel, closely spaced spot welds, extra-strong internal bracing and supports. All drawers are non-sag, non-spill, easy-running units with full-width, roll-type pulls for easy opening from any angle.

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8026-J 28th Avenue • Kenosha, Wisconsin

Sold on *Lincoln* !

no parts replacement after



Rear view of tractor cab showing 4 gallon capacity lubricant reservoir and supply line leading to Multi-Luber.



View of Multi-Luber unit mounted on inside of right frame rail with easily attached clamp-on brackets. Multi-Luber unit pumps lubricant to the bearings through fabric insulated nylon feed lines.

That's why

**Super Service Motor Freight
ordered Multi-Luber Power
Lubrication Systems for**

**161 new White tractors
147 new Fruehauf trailers
151 trailers already in service
125 trailers now being equipped**

"We equipped four of our White tractors with Lincoln Multi-Luber Systems for test purposes, and each of these tractors accumulated mileages in excess of 100,000. The results: all original parts, such as spindle bolts, tie-rod ends and spring shackle bolts, required no replacement. Also, we found no trace of wear on these parts.

"We installed Multi-Luber on 75 trailers. After 20 months of service, no more lubrication problems with adjustable sliding tandem rails. In addition, we saved on labor and eliminated lubrication down-time.

"In our opinion, Lincoln Multi-Luber Systems have a definite place in our operation."

**reports RAY E. CARTER, Director of Engineering
Super Service Motor Freight Company
Nashville, Tennessee**

Lincoln

LINCOLN ENGINEERING COMPANY

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100,000 mile test reveals
installing....



Lincoln
Multi-Luber *
automatic
**POWER
LUBRICATION**



MULTI-LUBER automatically cycles with each sixth application of the brakes, forcing a measured quantity of refinery-pure lubricant under high pressure into every bearing served by the system. Bearing surfaces are constantly flushed, and are assured a uniform protective film of lubricant. Hundreds of thousands of test miles prove Multi-Luber extends service-life of bearings and moving parts, reduces down-time and cost of replacing bearings damaged due to inadequate lubrication.

Get full details...write today for Bulletins 532, 533, and 534.

*Trade Name Registered

5703 NATURAL BRIDGE AVENUE • ST. LOUIS 20, MISSOURI

Too Much Smoke

Continued from Page 146

fan, radiator shutters, or other temperature regulating devices should be checked and repaired or replaced as necessary.

Incompletely burned fuel is expelled from the exhaust stack as black or gray smoke. Fuel or

lubricating oil that has not burned in the combustion chamber but is blown through the cylinder during the scavenging period appears as blue-colored smoke. White smoke is caused by raw fuel that has contacted the hot surfaces of the cylinders and exhaust manifold but has not ignited, thus, it indicates completely misfiring cylinders.

END

Please Resume Reading Page 84

GROTE'S Slim and Trim

GIANT STOP AND WARNING LAMPS







Grote's new line of thin, lightweight warning lamps gives you:

- **Greater safety** — The big 7" Bull's-eye and concentric circle lens pattern with 21-CP bulb is designed to give a brilliant high intensity warning — night or day.
- **Greater economy** — One-piece lens and rim construction means easier and faster bulb replacement. Plastic lens is fade-proof, shatter-proof. Lamp is sturdily made for years of dependable service.
- **Greater flexibility** — Available with STOP or plain lens for universal bracket or stud mounting, flush mounting or as dual faced emergency lamp; can also be furnished with double filament bulb for combination use as giant stop, tail and directional signal lamp.

GROTE

QUALITY SAFETY ACCESSORIES

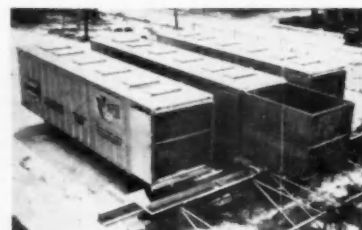


Lamps • Directional Signals • Reflectors • Flares • Mirrors

THE GROTE MANUFACTURING CO., INC., Bellevue, Ky. • Opposite Cincinnati

Jumble-Loaded Cans

A NEW TRANSPORTATION technique consists of loading jumble cans into a removable and reusable compartmented box or "liner" that in turn fits snugly inside the trailer. By means of a small, reversible conveyor, secured to the trailer bed, a loaded liner can be moved into the trailer for shipment and out again at destination for unloading. This liner can also be loaded while in the trailer through hatches in trailer roof.



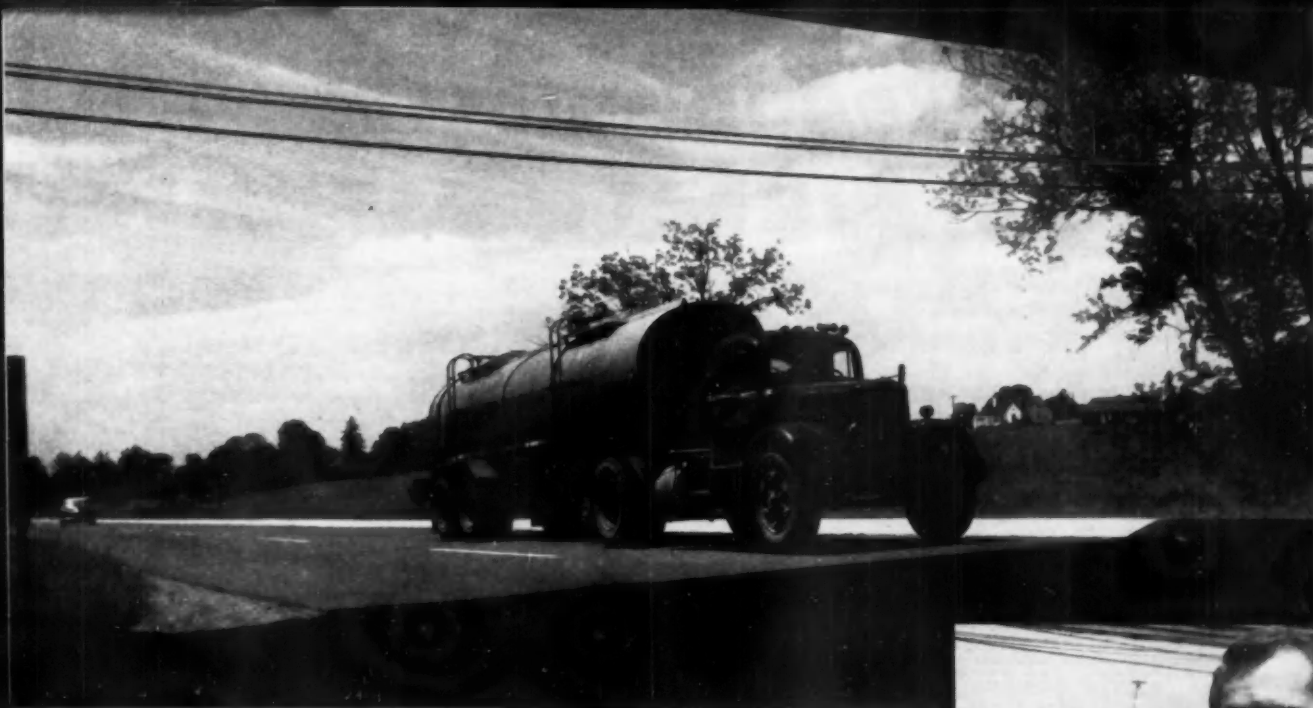
The conveyor, which makes the new technique possible, was developed by Link-Belt Co., Chicago. The new technique was initiated and supervised by American Can Co. to ship 6 oz decorated orange concentrate cans from Canco's Plymouth, Fla. plant to Minute Maid canneries at Plymouth and Leesburg, Fla.

Cans are merely "poured" or jumble-loaded into the compartmentized liner which is retracted into the trailer for shipment. At destination the liner is rolled out and, as it clears the tailgate, a trap door on the under side of each compartment swings open discharging cans into a belt conveyor which carries them to the production lines. Each liner-box in the initial test runs held 125,000 concentrate cans, weighed 10,280 lb.



"Will you excuse me for a second?
The boss wants to see me!"

COMMERCIAL CAR JOURNAL, October, 1957



A Stainless Steel tank truck operated by Chemical Tank Lines, Inc.

"The versatility of Stainless Steel tanks decreases deadheading by 20%,"

says Thomas R. Greenleaf, Assistant to the President, Chemical Tank Lines, Inc., Downingtown, Pa.



"WE HAVE BEEN HAULING nitric acid and other corrosive chemicals in Stainless Steel tanks since 1947," explains Mr. Greenleaf, "and we have found Stainless Steel vessels to have an indefinite life span, easy to clean, non-corroding and stain-resistant. The variety of materials that can be carried in the tanks, coupled with the comparative ease and speed of cleaning, spells out a minimum of non-productive time.

"Over 100 of the tanks in our chemical fleet are made of Stainless Steel. The weights of products carried in these tanks vary from 6½ pounds to 15½ pounds per gallon, and temperature ranges vary from 0° F. to 200° F. The tanks operate from 16 to 20 hours daily.

"We use Stainless tanks for any product requiring maintenance of purity and color, and where ease of cleaning after delivery is of prime importance. Fast and efficient washing is greatly facilitated by the polished finish of the Stainless Steel which does not absorb the materials

shipped and, therefore, lends itself to comparatively simple cleaning processes. Faster turn-around is a direct result of ease of cleaning. Stainless Steel tanks are ready for a return trip in about 3 to 4 hours after their arrival at the terminal. Chances of eliminating deadheading are also greatly increased because of Stainless Steel's ability to handle an almost unlimited variety of products. The versatility of these tanks is exemplified by our initial shipping of, for example, synthetic resins or formaldehyde and returning with a pharmaceutical grade product. In addition, Stainless Steel insures purity of the product because there is rarely a problem of staining or corrosion.

"We estimate that the versatility of Stainless Steel tanks permits us to utilize only three trucks where we might otherwise require five to meet the same schedule. This obviously means fewer tanks, tractors and personnel required, less housing and maintenance facilities and increased income," concludes Mr. Greenleaf.

United States Steel Corporation, Pittsburgh • American Steel & Wire Division, Cleveland • Columbia-Geneva Steel Division, San Francisco
National Tube Division, Pittsburgh • Tennessee Coal & Iron Division, Fairfield, Alabama • United States Steel Supply Division, Warehouse Distributors
United States Steel Export Company, New York

USS STAINLESS STEEL

SHEETS • STRIP • PLATES • BARS • BILLETS • PIPE • TUBES • WIRE • SPECIAL SECTIONS



UNITED STATES STEEL

WHITE "9000" DIESELS HELP SPEED DIRECT CUSTOMER

THESE NEW WHITES ARE ENGINEERED TO PUT TRANSPORTATION ON A PRODUCTION LINE BASIS

Schedules are mighty important for today's production lines—the reason White Trucks are preferred by so many leading manufacturers.

For example, Catalin Corporation of America, Calumet City, Ill., counts on its fleet of new White 9000 Diesels for two-way supply-lines . . . in-plant deliveries of raw materials and direct customer shipments of its industrial resins. Three-shift plant operations keep these modern White Trucks on the move—in 24 states—aver-

aging more than 100,000 miles a year.

Typical of modern transportation on precision schedules that must be maintained—today's Whites are engineered for dependable performance, maximum payloads and low-cost efficiency.

Find out how Whites can cut costs and save time in your business.

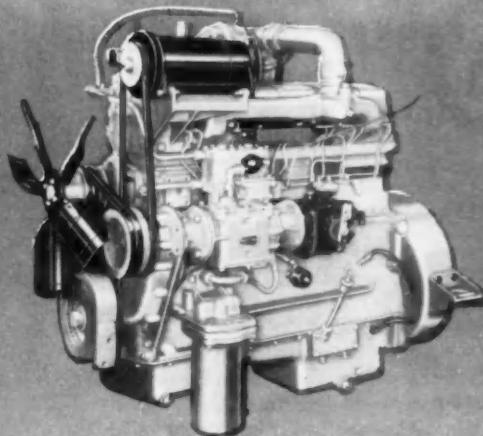
THE WHITE MOTOR COMPANY
Cleveland 1, Ohio

NEW WHITE DIESELS KEEP FUEL COSTS DOWN

The performance story of the new 175 Horsepower White Diesels is worth the reading time. Leading fleets have kept accurate cost records over millions of miles—under all kinds of road and load conditions.

Get Your Copy

Your White Representative will provide you with a copy of these fuel economy reports—outstanding performance even with today's maximum payloads—and in high-mileage service. Get facts today.



**New 175 Horsepower Turbodiesel Available
in all three lines of White Highway Tractors**



Ask your WHITE Representative or write today for a copy of the new White Diesel Report. It is convincing proof that today's greatest economy buy is WHITE!

CATALIN CORPORATION DELIVERY IN 24 STATES



Maximum Payloads Keep Distribution Costs Down

These new White tractors in the Catalin fleet are White 9000TD's engineered for maximum payloads of bulk chemicals. Stainless steel insulated tanks are 35 ft. long—have 3,650 gallon capacity with power take-off and self contained pump. Howard L. Shafer, traffic superintendent, reports his new Whites have improved delivery schedules and extra capacity tankers have kept delivery costs down.



Tru-Stop Brakes

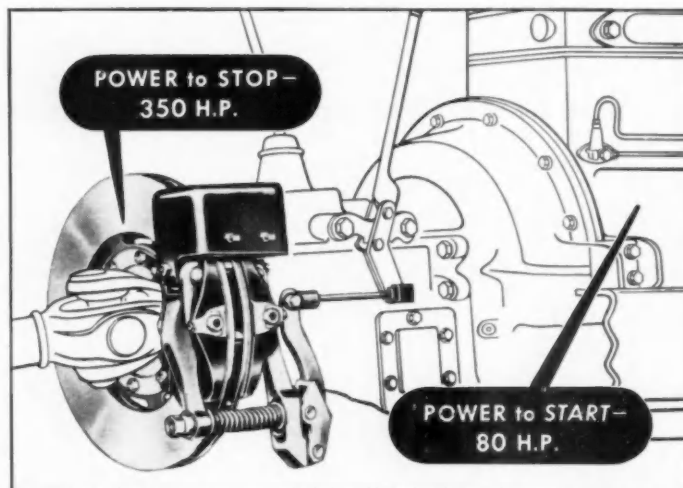
Meet Every Heavy-Duty Safety Requirement

OFFER POSITIVE PROTECTION
AGAINST RUNAWAY OR PARKING
ACCIDENTS—AT LOWEST COST

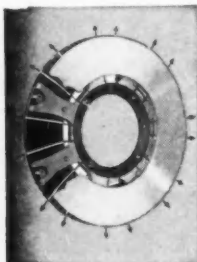
HERE IS WHY:

**They have surplus power
required for emergency
service—no dangerous
self-energizing**

TRU-STOP Heavy-Duty Emergency Brakes are not only excellent parking brakes. They serve as a complete, independent and fully reliable braking system. Operating on the propeller shaft they enable the driver to continue on safely in the event of service brake failure. TRU-STOP brakes have the surplus braking capacity to be used repeatedly as an auxiliary to service brakes.

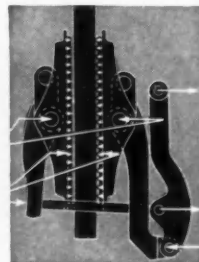


Brakes actually do more work than the engine in terms of horsepower. Where it takes 80 HP to accelerate to 20 miles per hour, it takes 350 HP to make a safe stop from 20 miles per hour within required limits.



Ventilated to throw off heat

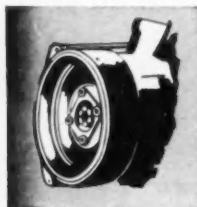
Brake efficiency depends on ability to throw off intense heat—rapidly. Discs of TRU-STOP brakes are exposed to the air even during the braking operation. Ventilating design circulates air between the disc plates.



Give uniform brake pressure

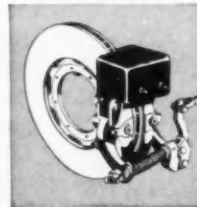
Disc of TRU-STOP brakes is "squeezed" between the flat surface of the shoes. Effort applied to brake lever operates front and rear lever arms simultaneously. Pressure is exerted on the center of each shoe. Entire lining surface is in contact.

**TRU-STOP HEAVY DUTY BRAKES OUTPERFORM AND OUTLAST DRUM-TYPE BRAKES
DON'T LET THE SURFACE AREA FOOL YOU!**



Drum-type brake

43¼ square inches of lining. Lining covers 310 degrees of the drum. **BUT** only 50 degrees of the lining-covered drum is exposed to the air.

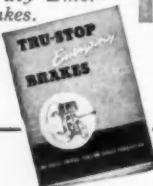


Tru-Stop brake

28 square inches of lining. 90 degrees of the disc under pressure. **BUT** 270 degrees of the disc is exposed to air. Directing and throwing off heat is basis of brake efficiency.

We will be glad to answer any questions or give you more detailed information about TRU-STOP Heavy Duty Emergency Brakes.

Send for
Catalog
DH 33



THE TEST

Drum-type Brake vs Tru-Stop Brake

After a few light and two heavy applications from 20 MPH, lining was useless for further test.

Repeatedly stopped vehicle from 50 MPH — was then used to decelerate on steep grades. No serious damage to lining.

**Automotive and Aircraft Division
AMERICAN CHAIN & CABLE**

601 Stephenson Building, Detroit 2
2216 S. Garfield Street, Los Angeles 22 • Bridgeport 2, Conn.



easy to form



You can form these castles in a variety of sizes and shapes. And Parish Pressed Steel Division of Dana Corporation, a leading manufacturer of automotive chassis and frames, uses A. W. Dynalloy steel for the same reason . . . easy formability!

There are other reasons, of course. A. W. Dynalloy is

- . . . resistant to shock
- . . . easy to weld
- . . . resistant to corrosion

As with Parish Pressed Steel, A. W. Dynalloy can give you more value per dollar spent on your steel product. Send for our A. W. Dynalloy booklet which gives complete information. Write Marketing Division, Dept. DY-S91.



A. W. DYNALLOY

ALAN WOOD STEEL COMPANY

steelmasters for more than a century and a quarter CONSHOHOCKEN, PA.

DISTRICT OFFICES AND REPRESENTATIVES: Philadelphia • New York • Los Angeles • Atlanta • Boston • Buffalo • Cincinnati • Cleveland • Detroit • Houston • Pittsburgh • Richmond • St. Paul • San Francisco • Seattle • Montreal & Toronto, Canada—A. C. Leslie & Co., Limited

DISTRIBUTOR CAP



For like-new distributor performance, always replace with these Dolco-Remy original equipment service parts.

CONTACT POINT SET



DISTRIBUTOR ROTOR



DELCO-REMY ORIGINAL EQUIPMENT SERVICE PARTS RESTORE LIKE-NEW PERFORMANCE TO DELCO-REMY EXTERNAL ADJUSTMENT DISTRIBUTORS

Like-new performance can be easily restored in Delco-Remy external adjustment distributors when Delco-Remy original equipment service parts are used. Naturally so, for these parts are identical in every quality detail to the parts that went into the distributor when it was manufactured.

DELCO-REMY PARTS WORK BETTER BECAUSE

- 1** DISTRIBUTOR CAPS are *designed* and *built* with specific characteristics including: functional overall shape; precision fit; scientifically shaped, voltage-saving internal ribbing; highly dielectric, shock-resistant quality materials.
- 2** ROTORS are *designed* and *built* to combine maximum strength with minimum weight; with superior balance to insure smooth rotation at high speeds; with voltage-saving contours for trouble-free, easy mounting and for radio noise suppression (resistor models).
- 3** CONTACT SETS are one-piece assemblies, precisely adjusted and aligned; easier to install and readily adjustable *while the engine is running!*

Always replace with Delco-Remy original equipment service parts when you service Delco-Remy equipped cars and trucks. They are available from your car or truck dealer or the United Motors System.

DELCO - REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

ELECTRICAL SYSTEMS

United Streamlines Inspections

Continued from Page 79

near the source of supply. He actually has little more to do than place parts in the cart instead of the parts bin.

In the same manner, a tool kit is made up for each job, placed

on another cart and is available to the mechanic as soon as his specified job is scheduled. This includes all hand tools, power tools, special pullers and adapters he will need for the anticipated job.

It again saves steps in going

back to the stock room for tools he failed to pick up. In this case the tool cart is charged out just as the tool would be. Carts are kept in the center of the work area so that they are immediately handy to all.

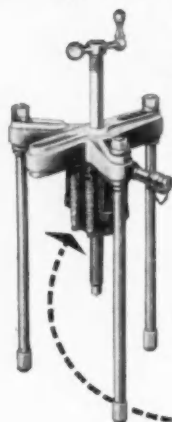
Mechanic training so all mechanics know exactly how to go about a job has been set up by United. The system shows the Job Description and Tool Requirements for each special job on each model coach in the property. As the name implies this is a step-by-step description of a certain job such as overhauling a B-4 brake valve. Standard procedure for tear down and inspection is listed, along with each step involved in adjusting and installation. Examples of other jobs include converter, carburetor, generator, starter, steering knuckle and differential.

Thus there can be no question as to how United wants the job done. There can be no question as to mechanic competency for he has all the information on each job before him. He does not have to ask the foreman for help and has no reason for walking to another section to get assistance from someone.

These job description sheets are typed up and set in transparent envelopes, filed at the shop foreman's desk in metal cabinets. They are used, of course, only when the mechanic is unfamiliar with the specific job he has been assigned. While it took considerable time to develop this system initially, there is not much work involved in keeping it up to date. Only when new routines are suggested by the shop or by the factory are the instruction sheets changed. Only a few units of new model coaches have sufficient changes to justify making up a new sheet, so normally, little time is required to keep the system up to date.

A similar instruction sheet is provided with each special tool kit made up for overhaul of complex assemblies. These kits consisting of pullers, adapters, gages and special wrenches are stored in metal boxes in the shop, have individual instruction sheets which go with them at all times. This is good in-

(TURN TO PAGE 162, PLEASE)



Speed repairs—get your units back working sooner—with OTC hydraulic pulling—installing tools—tools that save you time and money on repairs and maintenance . . . get your equipment out earning for you.

HERE'S AN OTC DAY- AND DOLLAR-SAVER

OTC HYDRAULIC 2-WAY 3-WAY PUSH-PULLER

This tool removes, installs hubs, bearings, gears, pulleys, sheaves, sleeves, bushings, cylinder liners—fast—on all your equipment . . . eases out stubborn rusted or "frozen" parts without distortion or breakage. Inexpensive adapters let your Push-Puller do hundreds of jobs.

Powerful OTC rams give you plenty of muscle—up to 100 tons—to do toughest jobs fast!

HERE ARE OTC
Push-Pullers and Power-Twin hydraulic rams saving time—saving money—

Send for your FREE OTC catalog—shows hundreds of tools in action.



Removing cylinder sleeve without removing studs. OTC sleeve tool and hydraulic ram also install new sleeves.



Kingpins come out fast with OTC Push-Puller and Power-Twin ram. Use on trucks, tractors, buses, cars.



OWATONNA TOOL COMPANY
341 CEDAR STREET • OWATONNA, MINNESOTA

VISION



LOOKING TO THE FUTURE—PRODUCING FOR TODAY!

Progress has been the keynote of the automotive industry. Today's achievements are but challenges for the accomplishments of tomorrow.

Over the years Bendix Products Division has contributed significantly to automotive progress. From four wheel brakes to power braking and power steering, Bendix has pioneered and developed many of the industry's most notable advancements.

And today Bendix Products Division is planning new and better products for the cars and trucks of tomorrow.

That's why the industry looks to Bendix* as a source of new ideas, as well as a volume manufacturer of automotive components.

*REG. U.S. PAT. OFF.

TYPICAL EXAMPLES



Bendix Power Brakes



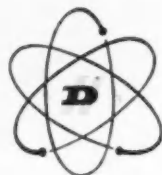
Bendix Power Steering

**BRAKES • POWER STEERING • POWER BRAKING
CONSTANT VELOCITY UNIVERSAL JOINTS • HYDRAULIC REMOTE CONTROLS**

Bendix PRODUCTS DIVISION **South Bend, IND.**



THE PEACETIME ATOM...



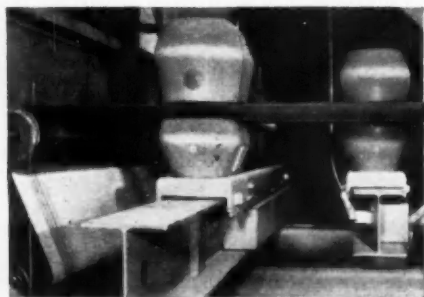
Makes Dunlop Tires MIGHTY TOUGH

...BETTER BALANCED

AccuRay®, the advanced atomic-powered control process, makes Dunlop truck tires tougher...also makes them more perfectly balanced. By assuring uniform application of an exact amount of protective rubber on every cord ply, AccuRay puts new strength...and uniform roundness into every Dunlop tire.

On tougher, balanced, AccuRated Dunlops, truck and fleet operators are getting better all-around performance...higher recap recovery and lower cost per mile.

Put AccuRated Dunlops on your trucks...and watch your tire costs drop. Available in Nylon or Super Hi-Test Rayon...tubeless or tubed...for highway or on-and-off the highway service.



DUNLOP'S AccuRay PROCESS—Electrons, emitted from an Atomic Isotope, scan sheets of coated tire cord, controlling uniform application of select insulating rubber within precise tolerances of $\pm .001$ inch.

AccuRay-T. M. Industrial Nuclonics Corp.

You'll go farther...SAFER...on tires by

DUNLOP

**They're
AccuRated**

DUNLOP TIRE AND RUBBER CORPORATION, BUFFALO 5, N. Y.





GENUINE PARTS

Quality parts where you want them... when you need them! We'll do our best to keep 'em rolling, regardless of make of truck.

WHITE-APPROVED ACCESSORIES

Complete line of truck accessories proved and tested for greatest service and value. All ICC approved.

MAJOR REPLACEMENT UNITS

Keep down-time down by investigating White replacement units—engines, axles, transmissions, etc.—today's way to get lowest cost performance.

MOST MODERN REPAIR FACILITIES

Fresh-trained master mechanics have the "know-how" to provide low-cost operation of your trucks.

WHITE CONTRACT MAINTENANCE

White has always been the leader in Planned Maintenance geared to your exact operating needs to cut your costs.

WHITE MAINTENANCE MANAGEMENT

We'll help you keep abreast of changing maintenance problems. Regular classroom training in latest methods to keep costs down, provided by White's "School on Wheels".

WHITE SAFE PRACTICES PROGRAM

Another White "First" to Keep 'Em Rolling—safely! All the latest safety information for fleet supervisors, drivers, maintenance departments.



TRUCK HEADQUARTERS U. S. A.

Look for that familiar White sign—you can depend on it for your every service needs... to get top truck mileages at lowest cost.

Wherever your trucks operate—whatever make trucks in your fleet—get acquainted with your White Representative.

It pays off... mile after mile!

TRUCK HEADQUARTERS—U. S. A.!

THE WHITE MOTOR COMPANY

Cleveland 1, Ohio

FOR MORE THAN
55 YEARS THE
GREATEST NAME IN TRUCKS



United Inspections

Continued from Page 158

surance in better workmanship, says United and also saves a lot of time of the foreman or supervisor.

Message system is a shop-built, novel system of communications between the foreman's



desk and the parts room. It is the familiar pneumatic tube put into service to save shoe leather.

Installed between the central shop desk of the foreman and the parts room located at the end of the shop, the system handles all forms requesting parts and supplies, gets the items or the information back with the minimum of delay. It's just another step in the elimination of steps, says United.

END

Please Resume Reading Page 80

Rugged and Ready
cut it
as you need it!



IMPERIAL

pressure hose with reusable couplings

BUY YOUR PRESSURE HOSE IN COILS. Save time and eliminate costly inventories of made-up hose assemblies with their many sizes, lengths and types of end couplings. Cut pressure hose as you need it—then simply add an Imperial reusable coupling. When hose is no longer serviceable, just reconnect new hose to same coupling. You get original equipment performance, and better, for oil, gasoline, air, water and hydraulic connections.

Write for Catalog 125.

1. FN Rubber-Covered Rayon Braid Hose. Working pressures to 300 psi.
2. Cotton-Covered Single Wire Braid Hose. Working pressures to 3,000 psi.
3. Rubber-Covered Single Wire Braid Hose. Working pressures to 2,500 psi.
4. Rubber-Covered Double Wire Braid Hose. Working pressures to 4,500 psi.
5. Line includes Reusable Couplings in a wide range of types and sizes.

Operating temperatures: -40° to +275° F.



Imperial offers a complete line of Male and Female Straight, Angle and Swivel Adapter Unions.

Imperial No. 384-F sawing vise for 3/16 to 1 1/2" O.D. sizes. For sawing wire-braid pressure hose with minimum wear to hacksaw blade. Square, clean cuts. Special hose gripper.

THE IMPERIAL BRASS MFG. CO.

1209 W. Harrison St., Chicago 7, Ill.

In Canada: 334 Lauder Ave., Toronto, Ont.

IMPERIAL

Emblem of Quality



Brass Fittings • Flexible Lines • Shut-Off Valves • Drum Faucets • Service Aids • Tubing Tools

Phone Code Scheme Draws Court Action

OVER THE past few months two trucking firms were named as defendants in suits filed by the Southwestern Bell Telephone Co. charging misuse of long distance service. Basically the claim was that a code calling scheme was used by drivers, dispatchers, and other employees to avoid payment for long distance calls.

The first suit, asking \$6,000 damages, was concluded when a Federal judge in Wichita, Kan., awarded the telephone company \$3,100 damages and costs. The court also issued a permanent injunction restraining the truck line, drivers, and other employees from using or permitting the use of a code or any other scheme by which long distance messages or information are transmitted without payment of the message toll charge.

The second suit, filed in Dallas, Texas, for \$25,000 actual and \$25,000 exemplary damages, is awaiting trial. A temporary injunction to the same effect as the permanent injunction in the Kansas case has been issued by the Dallas court.

The code calling schemes varied, but consisted of the use of fictitious names and of false statements in placing and answering collect and other long distance calls. The schemes were used to permit information to be passed without acceptance of the call and thus attempt to avoid the charge.

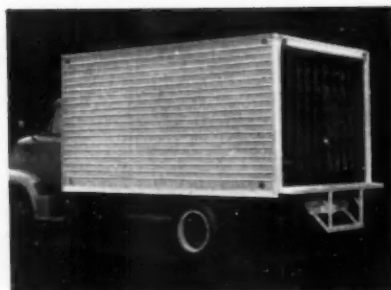
Telephone company officials say that it is, of course, improper to place calls without intending to pay for them and that they expect to take action if code schemes are used.



FRUEHAUF
Truck Bodies

**this page worth
\$25 to you!**

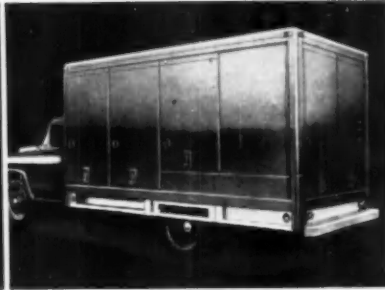
the top value truck body in America — Fruehauf —
will cost you even less if you bring in this ad



beaded or exterior post aluminum
unlimited choice of sizes and door options



painted, mounted "unit built" steel
over 500 body styles, sizes, and options



easily unloaded steel "worksaver"
with 8 sliding doors for fast access to load

MAIL OR BRING THIS COUPON WITH YOU FOR \$25 REDUCTION ON EVERY FRUEHAUF BODY ORDERED!

**ACT NOW—SAVE NOW—
\$25 OFF ON EVERY
FRUEHAUF BODY YOU
ORDER WITHIN
30 DAYS!**

Mail to *World's Largest Seller Of Van-Type Truck Bodies*
FRUEHAUF TRAILER COMPANY • Truck Body Division

10941 Harper Avenue • Detroit 32, Michigan

✓ YES, I WANT TO SAVE \$25 PER BODY

Type: ☐ Aluminum ☐ Steel ☐ WorkSaver

NAME _____

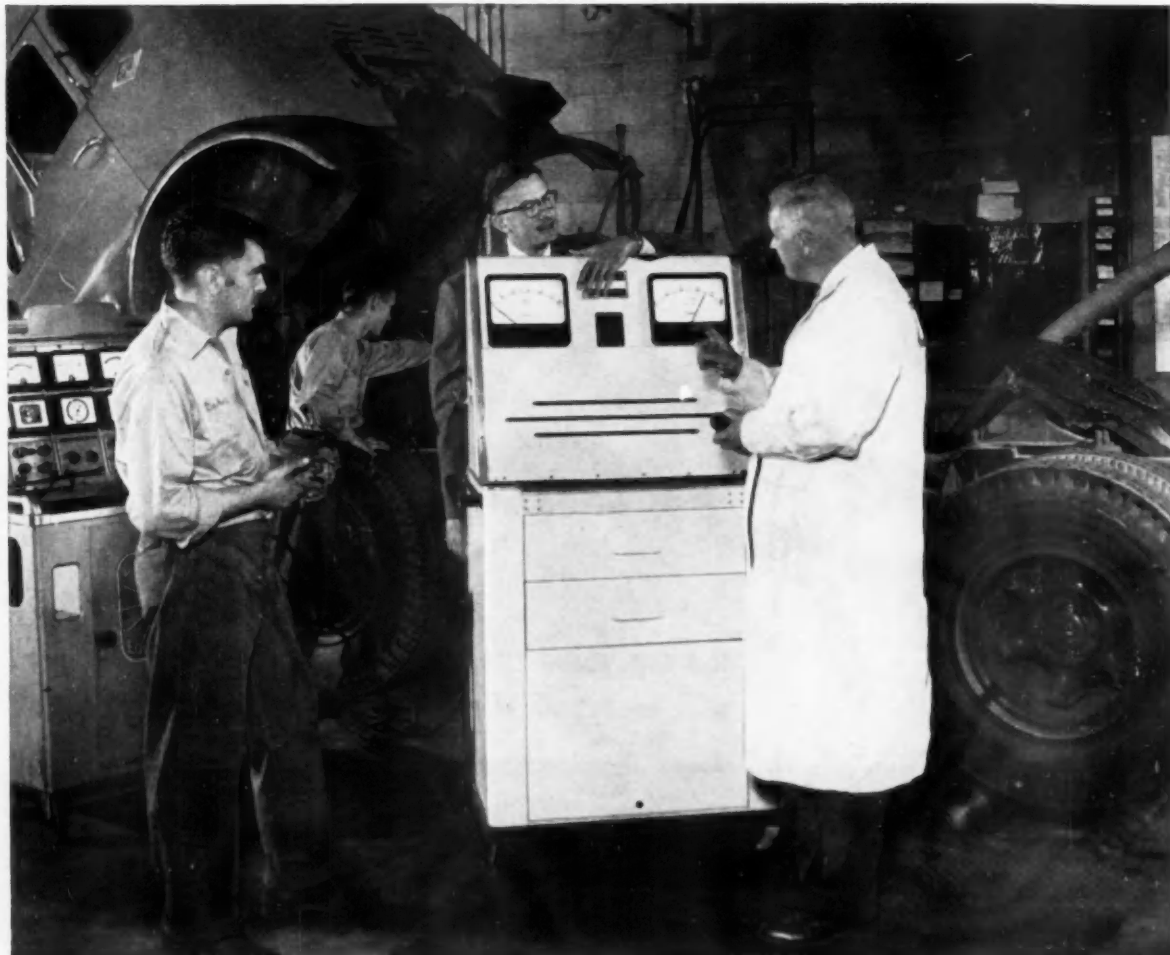
COMPANY _____

ADDRESS _____

CITY _____ STATE _____

★ No obligation to buy whatever when you mail this coupon!

Here are 4 ways Champion helps your fleet

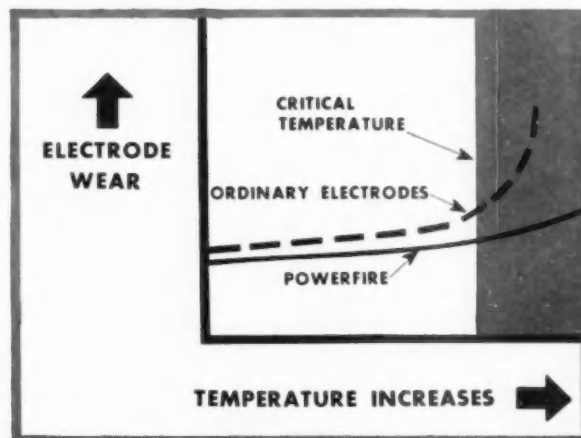


EXCLUSIVE TECHNICAL HELP

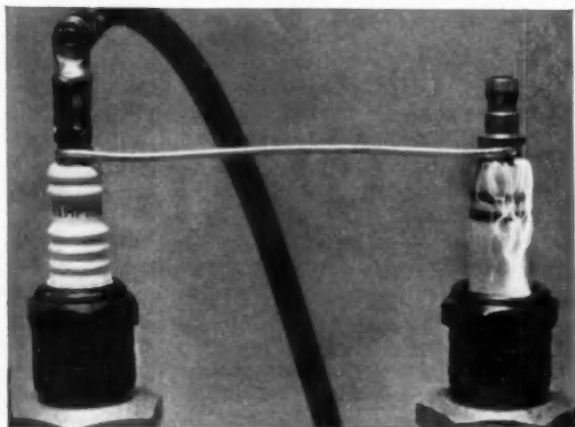
Champion's steadily growing fund of fleet ignition experience can help solve those problems that sometimes trouble you. It's available to your Champion sales representative and to Champion Field Engineers. They make a team with the knowledge and equipment to assure you top ignition performance under all operating conditions. And they're backed by the world's largest research and engineering organization devoted exclusively to spark plugs. Call on them for help.

MAXIMUM LIFE

Good engine performance demands plug electrodes that resist burning. This graph illustrates the longer life of Champion's Powerfire electrode under severe conditions. In the critical range (shaded) ordinary electrodes burn away far faster than Champion Powerfire electrodes.

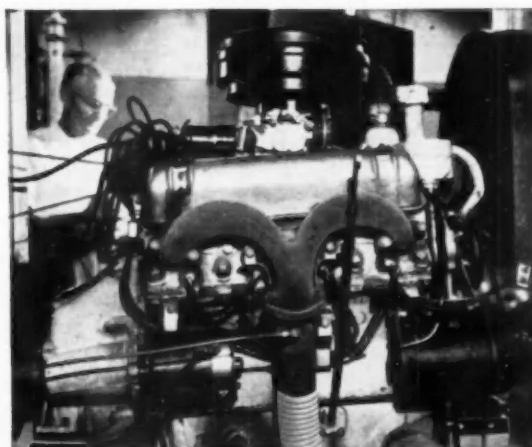


get better spark plug and ignition performance



EXCLUSIVE PRODUCT FEATURES

This photo graphically illustrates the advantage of Champion's exclusive 5-rib insulator in providing greater flashover protection. Both plugs are installed in a Comparator compression chamber and both plugs have the same amount of voltage applied. Notice how the smooth insulator discharges first, even though it has greater over-all length.



PRODUCT UNIFORMITY

This laboratory engine test is another of the many steps taken to assure that all Champions meet the same high quality standards. Rigid inspections of raw and in-process materials also help produce uniformly excellent spark plugs that give consistently fine performance.

CHAMPION SERVICE TIPS

for Better Truck Performance

TIMING MARK FLUTTER

When setting spark timing with a timing light, it's always good practice to slowly accelerate the engine to see if timing advances smoothly. Sometimes, due to excessive wear in the bushings or distributor drive train, flutter or "fanning" of the timing marks will be observed at certain r.p.m.'s. If the flutter exceeds about 3°, the condition should be corrected as the engine obviously is not firing at the proper time.

USE CORRECT WARM-UP PROCEDURES

Unnecessary racing of cold engines should always be avoided to allow proper circulation of lubricants. This is especially important with engines equipped with hydraulic valve lifters. If the lifters are partially empty, for example, when the engine is started, running at high r.p.m. immediately could conceivably force the plungers into a cocked position in the lifter bodies.

Some authorities also recommend that a new or rebuilt engine be cranked for a minute or two with the spark plugs removed prior to actual starting. This permits the oil pump to fully fill the lifters and the various lubrication passages . . . thus avoiding excessive engine wear during the first dry start.



Dependable 5-rib

CHAMPION

SPARK PLUGS

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO

Color Guide Shows Smoke Limits

Continued from Page 84

(2) a full color pocket guide showing standards for specific types of vehicles (shown at right).

The Detroit Police Dept. is currently using both the training film and the pocket guide in enforcing the vehicle smoke ordinance. Each enforcing officer is given the opportunity to view the film to become acquainted with the nature of the vehicle smoke problems. He is then issued a copy of the pocket guide to use in the field in identifying excessive "smokers."

Major purpose of the training film is to present the exhaust smoke problem to enforcement personnel. The film shows typical exhaust smoke emissions from the most common vehicle types, indicates broadly which emissions are bad, and points out misleading

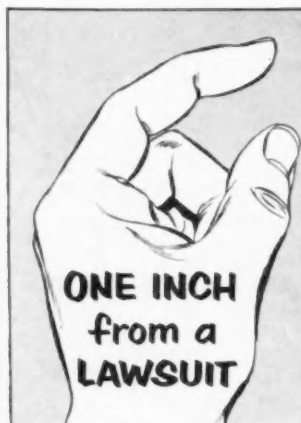
conditions during which vehicles may appear to have excessive emission.

The task was begun by collecting all of the available smoke emission film that the participating companies had in their files. From these films and from "on the spot" observations of smoking vehicles operating on the city streets, it became apparent that many factors, such as background, lighting, wind direction and velocity, camera position, exhaust pipe position, engine type, etc., would need to be considered in making the film. Each participating company took color motion pictures of emissions from different types of vehicles against various backgrounds, and under different operating conditions. In order to obtain varying degrees of

emission from a given vehicle, it was sometimes necessary to simulate smoking conditions.

The resulting films were screened and those best approaching typical operating conditions were combined into a preliminary training film. The film included examples of necessary and unnecessary smoke emission from various types of vehicles. This preliminary version of the training film was shown to the Air Pollution Control Assn.

As a result of favorable response from both city and industry officials, as well as the APCA, the final professional version of the film was prepared. The final version, "No Smoking," is about 10 min in length and includes illustrations of necessary and unnecessary exhaust smoke emissions from passenger cars, gasoline-powered trucks, diesel-powered trucks with both horizontal and vertical exhausts, gasoline and diesel powered coaches.



As explained in the film narrative, unnecessary visible emissions from gasoline-powered vehicles are usually caused by excessive oil consumption resulting from worn piston rings, cylinder liners, and valve guides. Similar emissions from diesel engines generally result from over-fueling that may be caused by incorrect injector adjustment or burned injector tips, restrictions in the inlet air system, overloading the engine, substandard fuel, cold operation, or mechanical deterioration of the engine. Misleading conditions, such as the emission of water vapor during cold operation, and the formulation of dust clouds resembling exhaust emission, are illustrated. The film is simple, direct, and can be easily understood by non-technical personnel.

In order to identify vehicles that are smoking unnecessarily, the small pocket guide was developed. The guide includes examples of unnecessary smoke

emission from common types of vehicles. Color photographs were made showing various degrees of exhaust smoke emission for passenger cars, gasoline-powered trucks, diesel-powered trucks having both vertical and horizontal exhausts, gasoline-powered coaches, and diesel-powered coaches. Smoking conditions were simulated in order to maintain better control of background color, smoke intensity, wind direction and velocity, lighting, etc.

For a given vehicle type, if smoke emission is equal to or greater than that shown in the appropriate photograph, it is considered unnecessary. Certain operating conditions produce emissions which may be misleading to the observer. Among these are: water vapor formation during cold weather operation, emissions during diesel engine warmup, emissions of short duration during gear-shifting, and dust clouds formed at the rear of a moving vehicle.

The guide is copyrighted by the AMA because of the precision required to accurately reproduce color photographs of exhaust smoke emissions. Prior to final issuance, it was reviewed by AMA Vehicle Regulation Subcommittee, AMA Vehicle Combustion Products Subcommittee, AMA Truck Technical Committee, AMA Service Managers Committee, Air Pollution Control Assn., Michigan Trucking Assn., Michigan Motor Bus Assn., Detroit Police Dept., Detroit Smoke Abatement Bureau, Detroit Traffic Court Judges and Referees, Cincinnati Smoke Abatement Officials, Cincinnati Transit Co.

Copies of the training film "No Smoking" are available through the AMA at a cost of \$47.50 each. Copies of the "Motor Vehicle Exhaust Smoke Guide" are also available through the AMA. The exact cost has not yet been determined.

END

Please Resume Reading Page 87



FREE FOLDER

Tells all about special fleet stocking cabinet and the BIG BONUS oil seal kit.

WRITE FOR YOUR COPY TODAY!

Remember—
ALWAYS REPLACE
NEVER RE-USE!



Whatever Your Requirements

SPECIFY...

TIMKEN-DETROIT[®]

Cross-country trucking... quarrying... logging... mining... heavy construction... whatever your on- or off-highway hauling needs—one of the products in the complete Timken-Detroit line of lightweight, medium and heavy-duty, and planetary tandem driving axles will assure you more productive work time—faster, more economical maintenance... smaller parts inventory!



TIMKEN-DETROIT LIGHTWEIGHT TANDEM

gives you greater payload capacity. Up to 700 pounds lighter than any other unit of equal capacity, this new lightweight tandem will give you up to 26,000 extra ton-miles of payload in every 75,000 miles of operation.



ON

Timken-
vides to
permit v
or slowe
axles do
parts an
the cab,
at any sp

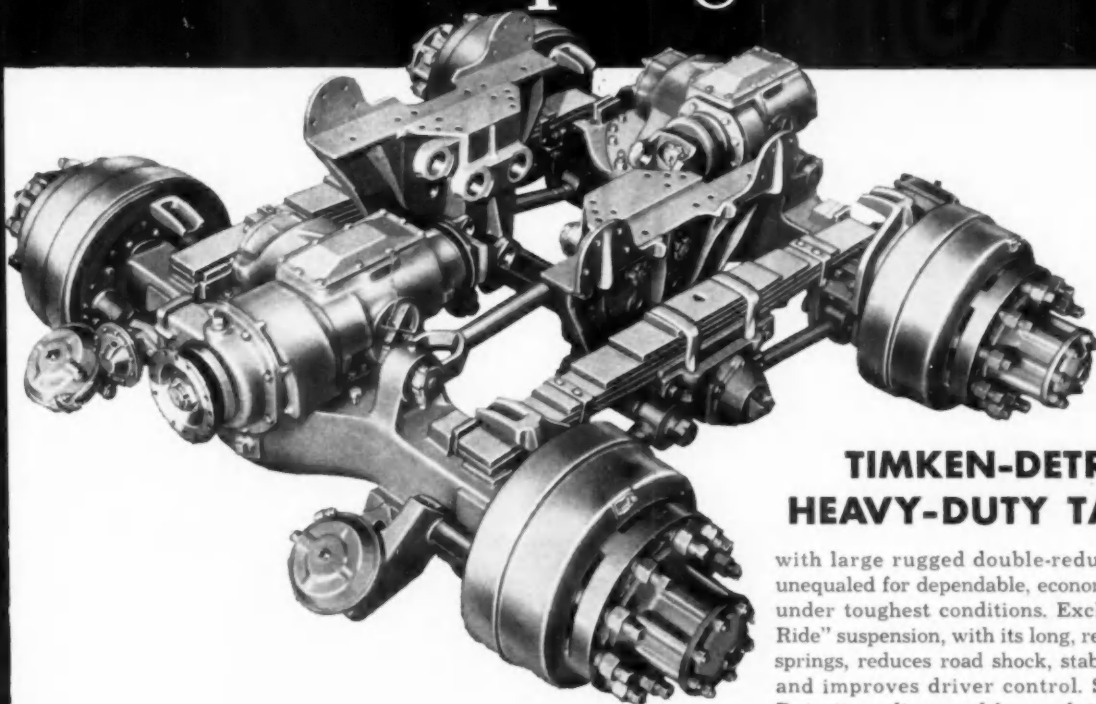
Timken-
Drive gi
Bearing
because
material

WOR

for Tandem Driving Axles

Products of

Rockwell Spring and Axle Co.



TIMKEN-DETROIT HEAVY-DUTY TANDEM

with large rugged double-reduction gears is unequaled for dependable, economical operation under toughest conditions. Exclusive "Cradle Ride" suspension, with its long, resilient, floating springs, reduces road shock, stabilizes the load, and improves driver control. Some Timken-Detroit medium and heavy-duty tandems are available with worm drive.

ONLY TIMKEN-DETROIT OFFERS YOU ALL THESE EXCLUSIVE FEATURES AND ADVANTAGES!

Timken-Detroit Inter-Axle Differential divides torque evenly between axles, yet permit wheels of one axle to revolve faster or slower than wheels of other axle. Both axles do equal amounts of work. Driving parts and tires last longer. Controlled from the cab, the differential can be locked out at any speed to give positive through-drive.

Timken-Detroit "In-Line" Propeller Shaft Drive gives you straight-through drive. Bearing and gear life is greatly increased because universal joint working angles are materially reduced.

Unequaled Parts Interchangeability means easier maintenance. Almost all parts in TDA® tandems—gears, pinions, differentials and brakes—are interchangeable with parts from Timken-Detroit standard single axles. This means more productive operation time—fast, simple, economical maintenance, smaller parts inventory.

Famous Torsion Flow Axle Shafts are made even stronger through the use of more splines and greater root diameter.

Timken-Detroit Rectangular Shaped Axle Housings are forged from high carbon steel. This shape, plus TDA full strength

corner sections, provides greatest strength possible with minimum weight and size.

Timken-Detroit Hypoid Gears with their larger pinions and greater tooth contact give outstanding performance, top efficiency and long life—plus lower maintenance costs.

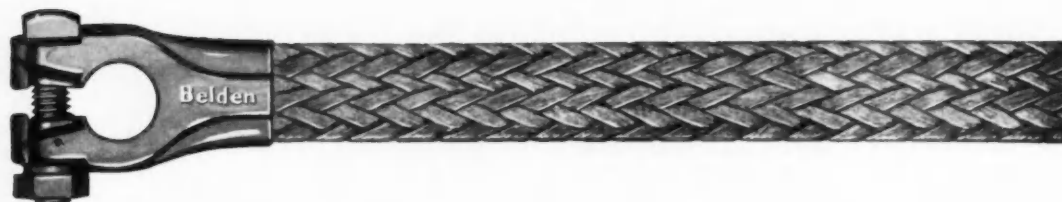
Dependable Heavy-Duty "P" Series Air Brakes utilize a unit-mounted design to make a compact self-contained assembly. Open type spiders mean lower temperatures, longer liner life. Tapered "Econoliners" provide greatest thickness in area of greatest wear.

©1957, RS&A Company

WORLD'S LARGEST MANUFACTURER OF AXLES FOR TRUCKS, BUSES AND TRAILERS



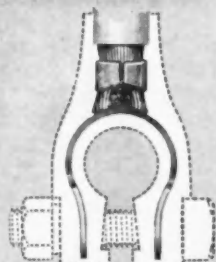
If it's worth a good Serviceman's time...



...it's worth a good Battery Cable

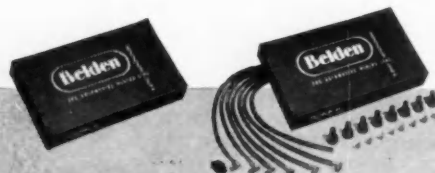


Exclusive



Belden Nekrode Battery Cable Terminals are die-cast over a steel frame securely anchored to the conductor.

Belden Lugs are formed over the full conductor to deliver full starting power.



Battery Cables

Spark Plug Wires

Lighting Wires

Belden

WIREMAKER FOR INDUSTRY
SINCE 1902
CHICAGO



Modernize

your present Motor Tuner with

HEYER BIG SCREEN 8½" DYNA-VISION®

Save labor, increase profits by installing the famous Heyer instant engine analyzer on your present equipment. Get the advantages of both primary and secondary ignition analyzers—the automatic com-

parator and identifier circuits. Ask your car representative what his factory thinks of Dyna-Vision. Ask for a demonstration today—every day you wait costs you money.

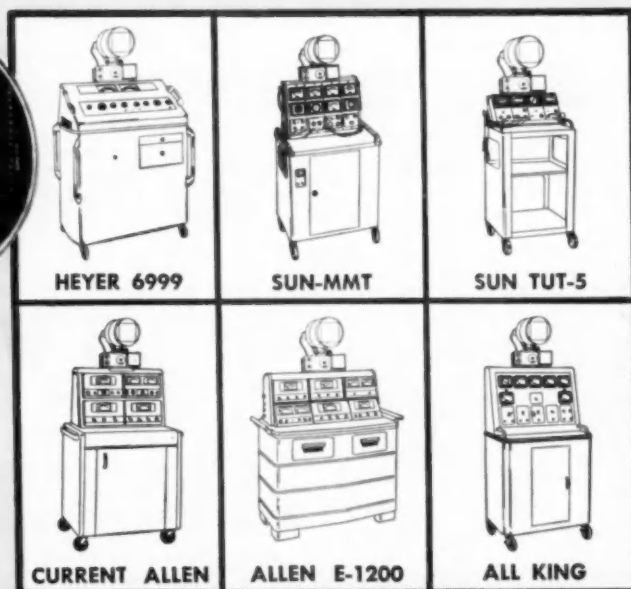
Model 335K Dyna-Vision Conversion Kit



PRICE \$475.00

or \$47.50 down, 48c per day

includes training and 1 year warranty. Installed in 30 minutes by our representative.



HEYER

To HEYER INDUSTRIES, INC., BELLEVILLE 9, NEW JERSEY

I would like a DYNA-VISION demonstration. No obligation, of course. "G"

NAME.....

ADDRESS.....

CITY.....STATE.....

BY.....DATE.....

H



Mr. John Barrett (right), President, and Mr. Jacob Silverman, Executive Vice President of Rodgers Motor Lines, expressed high praise for the performance of Lo-Level vans. They are shown in the office of Mr. Barrett at Rodgers' Scranton headquarters which serves as nerve center for the company's 14 terminals.

***"Our LO-LEVEL vans exceed
drop frame capacity
9 times out of 10!"***



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STRAIGHT FLOOR LOADING—Here is a Lo-Level van partially loaded with skids of paper. According to Mr. Barrett, this large, unusually heavy commodity is an excellent example of the type of freight that cannot be properly handled over a "drop".



CAPACITY LOADING—This view of a fully loaded Lo-Level van demonstrates how this truly functional trailer is helping Rodgers to increase revenue by moving more freight with less equipment.

In commenting on their 85 new Lo-Level vans, John P. Barrett, President of Rodgers Motors Lines, had this to say.

"We're primarily a general commodities carrier and, therefore, stress capacity loading. And thanks to Lo-Level's straight floor, we don't waste valuable space packing over a 'drop' or shoring up behind it. The end result is always a bigger pay load. In fact, I'd say *Lo-Levels exceed drop frame capacity nine times out of ten.*"

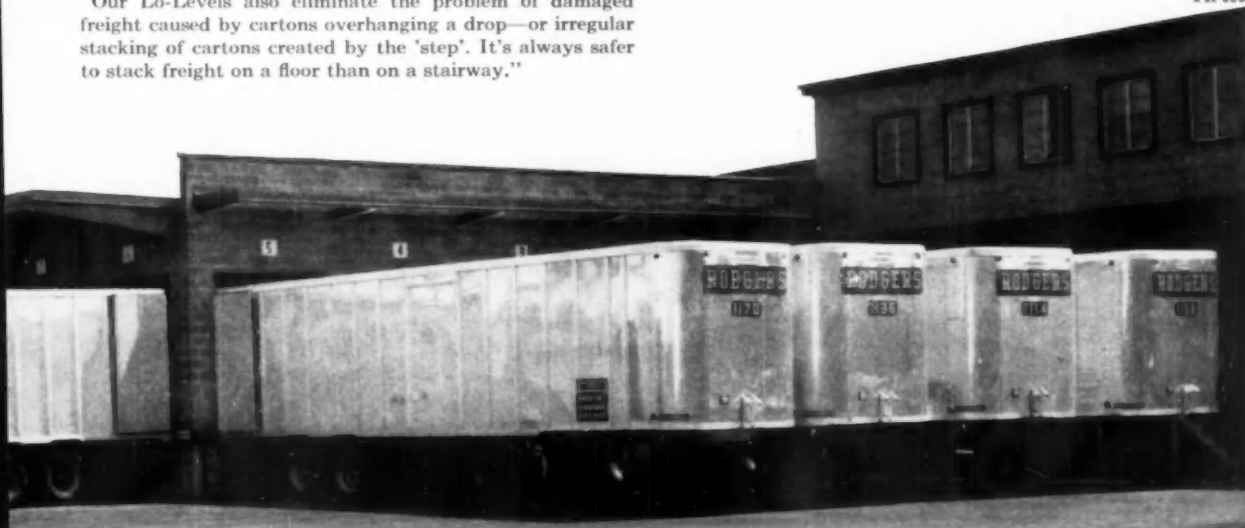
"Because there is no cumbersome 'step' to impede packing of freight, we find Lo-Levels both easier and faster to load. Lift trucks and dollies can go all the way to the nose and there is never any need for double cargo handling. And, we never have to sacrifice space in the front of the trailer because freight is either too long or too heavy to pack over the 'drop'."

"Our Lo-Levels also eliminate the problem of damaged freight caused by cartons overhanging a drop—or irregular stacking of cartons created by the 'step'. It's always safer to stack freight on a floor than on a stairway."

TRAILMOBILE INC.

CINCINNATI 9, OHIO • LONGVIEW, TEXAS • SPRINGFIELD, MO. • BERKELEY 10, CALIF.

TR-650



Seat Belts—Help or Hazard?

Continued from Page 81

than staying with it. The project's studies, according to Moore, show a fatality rate of 12.8 per cent for car occupants completely ejected through open doors in injury-producing accidents compared with a rate of 2.6 per cent for non-ejectees.

Biggest problem noted by fleet users is driver apathy. Even so, only one indicated that his company was dropping the program. He is P. J. Rooney, Director of Safety, Roadway Express, Inc., Akron, Ohio, who says:

"We experimented extensively

with both seat belts and harness type belts in a portion of our fleet. After studying them for a period of time, it was decided against going ahead on a belt program.

"We asked our drivers' opinions on a number of questions concerning seat belts. In addition to a number of specific complaints about them, a majority of drivers voted 'No' to the question: 'Should we install them in our fleet?' and said they would not use the belts if they were installed.



No "Babies" Behind Bus Wheels!

Piloting a cross-country "sleeper" on schedule is a rugged job for rugged men — and rugged parts! Over hot desert highways or snow banked mountain roads — bus fleets face the most difficult operating conditions. That's one "Big Reason" why successful bus fleet operators place an overwhelming vote of confidence in

BLUE STREAK special heavy-duty ignition parts. These smart bus men know how to save money on operating costs. *They demand BLUE STREAK.* Why don't you? For more information, write: Standard Motor Products, Inc. Long Island City 1, New York

BLUE STREAK

Heavy-duty Ignition Parts for Fleets

Coils • Condensers • Point Sets • Voltage Regulators • Switches
Rotors • Distributor Heads • Brush Sets • Wire & Cable



"It is (my) personal opinion that the benefits from seat belts in large commercial vehicles would not be as great as those received in passenger cars. . . . It was no hasty decision on our part to decide against the use of belts. We studied their use thoroughly before deciding against total installation."

In contrast, Holly Bradley, Safety Supervisor, Service Pipe Line Co., Tulsa, Okla., had this to say: "Our automotive safety belt program was started in 1955 when belts were installed in all units of our fleet of several hundred vehicles. Since that time, several of the vehicles have been involved in head-on collisions and were demolished beyond repair, and seven vehicles have been upset, some of them rolling over several times, and no fatality occurred as a result of any of these accidents. Four of our drivers stated that they cer-

(TURN TO PAGE 179, PLEASE)



"That heat might feel good, but you're slowing down production!"



**A
CONTINUING
REPORT**

**EVANS
HEATERS
ON
THE
JOB**

*These "Baby Chick Vans"
must have constant heat . . .*
EVANS TRUCK HEATERS
do the job!



Thousands of hours-old baby chicks stake their lives each winter day on the dependable, easily-controlled heat of Evans Truck Heaters. Hatchery owner Jack White, of Farmington, Iowa, started using Evans Truck Heaters to protect his fragile cargoes seven years ago.

Says Mr. White: "We had tried several different kinds of heating units, but we were losing many chicks due to heat failure. Then we tried Evans Truck Heaters—the same heaters we were using in our truck cabs—and our problems were over. The steady, well-ventilated heat of Evans Truck Heaters keeps our chicks alive and thriving through the coldest mid-winter temperatures."

Whether you need heaters for driver comfort or cargo protection, Evans Truck Heaters are designed to meet all your requirements. Each heater is centered around a heavy-duty, around-the-clock service motor; an exclusive one-piece, die-cast fan developed in Evans' laboratory; a rugged fin and tube-type core . . . all

merged into a compact unit that delivers high performance with low maintenance.

If you want additional information, or our heater catalog write Evans Products Company, Dept. Q-10, Plymouth, Michigan.

Regional Representatives: Cleveland, Frank A. Chase . . . Chicago, R. A. Lennox Co., Inc. . . . Detroit, Chas. F. Murray Sales Co. . . . Allentown, Pa., P. R. Weidner

**AN EVANS HEATER CAN BE DESIGNED
TO SOLVE ANY TRUCK HEATING PROBLEM**



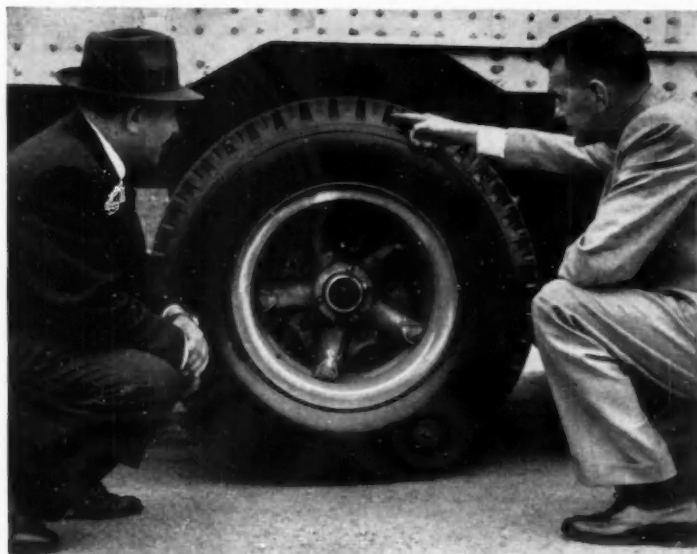
EVANS PRODUCTS COMPANY also produces: railroad loading equipment; bicycles and velocipedes; Evanite hardboard; Evanite battery separators; fir lumber; and Evaner fir plywood.

TIRES CAN RUN YOU IN THE RED!

AVOID TIRE TROUBLES WITH SUPER RAYON CORD!

Super Rayon's premium performance
keeps you in the black!

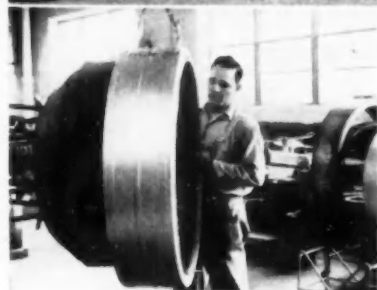




Super Rayon lasts longer. Durable new Super Rayon, strong as steel, actually gives you a tread wear bonus of up to 26%. That's money in your pocket!



Quietest, smoothest rides. Since Super Rayon doesn't go softer or harder or expand or contract, it's flexible—on the go or at rest. No annoying "flat spots" or thumping due to cord growth or heat setting!



Retreads better. Since Super Rayon doesn't "grow" at high temperatures, extra steps are eliminated. (And does that add up!)



Less down time. Super Rayon is most stable of all tire cords, at all temperatures. That means fewer chunk outs, less tread cracking. Safety, operating efficiency, economy!

Costs less. You'd expect such outstanding performance to go along with high price tags. Super Rayon cord tires actually cost you *less*; less to buy, less to run!

Don't miss... Miss Universe!

Carol Morris

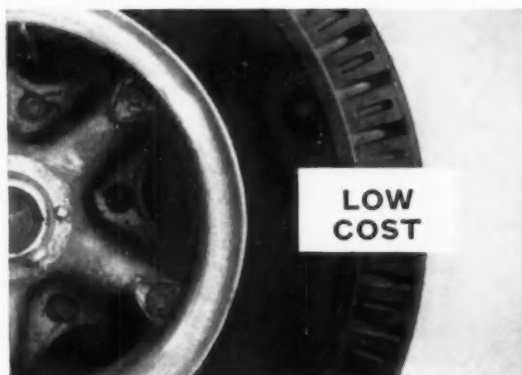
Miss Universe 1957

at American Viscose booths

245, 246, 247

NTDRA Convention, Music Hall

Cincinnati, Oct. 12-16



**LOW
COST**

AVISCO® TIRE RAYON

AMERICAN VISCOSE CORPORATION
350 Fifth Avenue, New York 1, N. Y.



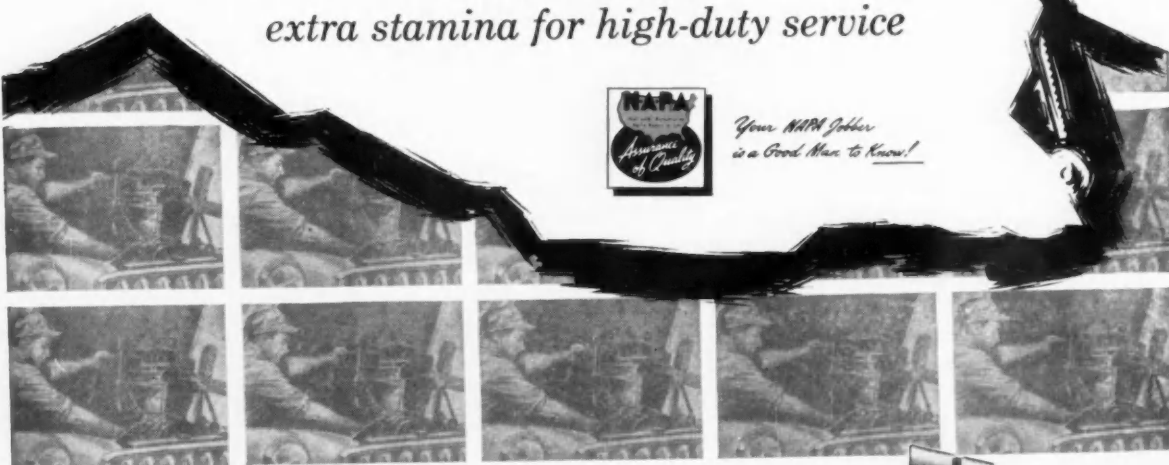
For Engine Overhauls...

standardize on **CLEVITE 77*** bearings

extra stamina for high-duty service



*Your NAPA Jobber
is a Good Man to Know!*



Monmouth

ENGINE BEARINGS

CLEVITE SERVICE

The Cleveland Graphite Bronze Co.
Division of Clevite Corporation
Cleveland 3, Ohio



*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation

Seat Belts

Continued from Page 174

tainly would have been killed if they had not been using a seat belt at the time of their accident.

"... We recommend that all fleet operators, as well as individual car owners, install belts in their units and that an educational program concerning the effectiveness of seat belts be inaugurated and maintained on a national basis."

National Supply Co., Pittsburgh, Pa., has had a compulsory seat belt program for the past two years. The company operates more than 600 vehicles, most of them passenger cars. A company representative reports:

"We have testimonials from

National personnel involved in major accidents, stating the safety belt was the reason they received minor injuries or were uninjured. ... (Our drivers) have also praised the belt because it reduces fatigue."

The fatigue-reducing effect of seat belts was also noted by John H. Waspi, Director of Safety and Driver Personnel for Allied Van Lines, Inc., Broadview, Ill. Mr. Waspi made a 14,000 mile trip in one of the company's rigs equipped with seat belts, is convinced of their value, has them on his personal car.

Allied's policy

on seat belts is that they are recommended but not compulsory. A small number of Allied drivers use them, the majority do not.

Ansul Chemical Co., Marinette, Wis., has had seat belts in its salesmen's cars since 1954. Company officials report a number of examples proving the belt's value, sum up their experience with:

"Perhaps there is merit in some of the arguments presented against seat belts, but our own experience ... has indicated that seat belts have definitely protected our salesmen from death and/or serious injury."

END

Please Resume Reading Page 82

ANNOUNCING



MAGNUS
MIJI LIF
Patents Pending

NEW, LOW-COST AGITATING CLEANING MACHINE!

... Puts the proven advantages of mechanically agitated cleaning within reach of every automotive shop.

Specifically designed to provide low-cost agitating cleaning of small, accessory parts such as pistons, valves, fuel pumps, carburetors, etc., this new development by the inventors and creators of the Magnus Aja Lif Cleaning Machine offers:

- ★ DUAL AGITATION—of parts and liquid, for fast, thorough economical cleaning.
- ★ AIR OPERATION—for easy installation and safe, sturdy operation.
- ★ BATTLESHIP CONSTRUCTION—or lasting 14 gauge sheet steel.
- ★ 75 POUND CAPACITY—21" x 18" platform.
- ★ SINGLE LEVER OPERATION—to raise or lower work automatically.

Write today for free information to Magnus,
38 South Avenue, Garwood, New Jersey.



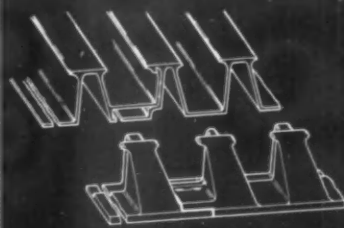
AUTOMOTIVE DIVISION
MAGNUS CHEMICAL CO., INC.

—a world-wide organization specializing in the cleaning and protection of all surfaces.

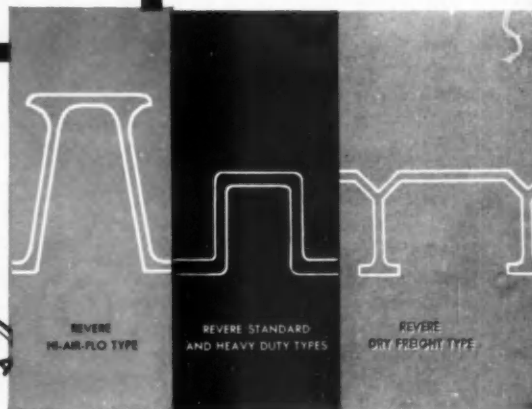
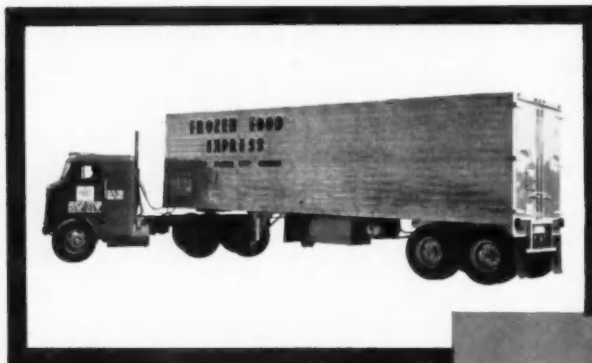
TRUCKERS SAY—*best floors ever!* *Revere patented*



Shown here are two of Revere's many contributions to the trucking industry: Revere Hi-Air-Flo floor sections, and the patented Revere interlocking design.

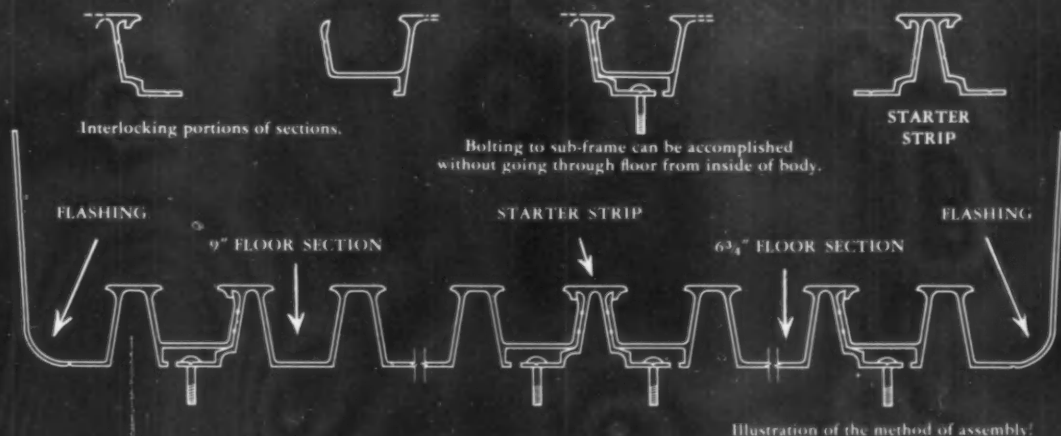


MULTI-
END-PLUG CASTING
(Exploded view)



REVERE COPPER AND

HI-AIR-FLO ALUMINUM REEFER FLOOR SECTIONS



New—to meet the growing demand for increased air circulation under and around the cargo in reefer bodies—these Hi-Air-Flo aluminum floor sections developed by Revere bring you many advantages.

Examine the details of the design. Note the $\frac{3}{8}$ " increased height of the new Revere sections, which provides 60% more space for air circulation. Check the new contours, engineered for full load-bearing capacity despite the increased height, and with the minimum increase in weight. And notice how the design provides a safety factor by preventing wheels from becoming wedged in the tapered channels.

And that is not all! Revere's special interlocking feature* which has been so enthusiastically received in other Revere floor sections has been incorporated into the Hi-Air-Flo design. It speeds up and simplifies floor construction. With proper installation it insures a watertight floor. It permits bolting the boards to the sub-frame without going through the floor from inside the body. There are no exposed bolt heads, and no bolt holes through which water could leak.

The Hi-Air-Flo sections also retain Revere's unique starter strip feature. Starter strips, available in a choice of three widths, are laid at or near the center line of the body and the floor is built outward toward each side. This feature further simplifies installation and, in case of an accident in service requiring floor repairs, only that side of the floor need be taken up to which damage has occurred.

*Patent No. 2,786,556

In addition, the new Hi-Air-Flo floor includes aluminum Multi-End-Plug Castings as in Revere's other reefer floors. These have been extremely popular with body builders and truck operators alike because they save hours of time in sealing the ends of the floor boards and flashing, and protect the ends so thoroughly against materials handling trucks. And they look neat.

FOUR TYPES OF REVERE ALUMINUM FLOORS NOW AVAILABLE

There are four types of Revere floor sections now available: Hi-Air-Flo ($1\frac{1}{8}$ " depth); both Standard and Heavy-Duty ($1\frac{1}{4}$ " depth); and Revere Dry Freight Floor Sections ($1\frac{1}{4}$ " overall height). All have Revere's patented interlocking design and all embody the important starter strip feature. All reefer sections can be furnished with multi-end-plug castings. Almost any specific width of floor can be built with Revere sections.

Heat treated aluminum alloys are generally used for floor sections, but for extra heavy loads Revere floors can be supplied in the high-strength heat treatable alloys. A Revere Technical Advisor will be glad to consult with you about this and other matters pertaining to the use of metals.

Write or phone today for full details on all Revere Aluminum Floor Sections. Ask your body builder, automotive parts distributor or the nearest Revere Sales Office for complete information.

BRASS INCORPORATED Founded by Paul Revere in 1801

230 Park Avenue, New York 17, N. Y. Sales Offices in Principal Cities



Updating Body Cleaning and Painting

Continued from Page 75

continuous for a number of vehicles, since with this method the stripper is reclaimed and recirculated.

• Spray-on: Strippers are applied under high pressure with a gun, or at lower pressure through a hot-spray unit. The steam gun

method can be used effectively to remove heavy soils along with the paint or where the heat and mechanical force of steam pressure will save stripping time.

Unpainted aluminum bodies continue to be popular with many operators, while others require

painted bodies—often with attractive decals—for their effect as eye catchers.

Painting aluminum involves four requirements: a clean surface; adequate pre-treatment; a suitable priming coat; and a properly formulated finishing system. In preparing the surface all grease and dirt must be removed with organic solvents or alkaline solutions. Heavy deposits are removed by solvent followed by alkali cleaning.

Zinc chromate is the most satisfactory primer pigment because of its corrosion inhibiting properties. Other suitable primer pigments are barium chromate, calcium chromate and zinc oxide. Primers containing lead compounds should not be used on aluminum since they reduce its corrosion resistance. Paints pigmented with graphite or metallic lead can be used in intermediate and top coats since they are not in direct contact with the metal.

Filling and stopping are necessary to produce a smooth surface on new work or on work that is being repainted. The stopper is used to fill joint gaps, rivet depressions, deep scratches and tool marks.

After it has hardened it should be rubbed down flush with sandpaper. One or two coats of filler surface can then be sprayed on to fill minor irregularities. Each coat should be rubbed down with waterproof abrasive paper.

END

Please Resume Reading Page 76

This TRUCK BODY TRIO



This SERVALL UTILITY TRUCK BODY utilizes Eberhard's Paddle Handle Recessed Door Lock No. 4881 on all compartment doors. Body by KOENIG IRON WORKS, Inc. HOUSTON, TEXAS.

is **Eber HARDWARE**
for Maximum Service
with Minimum Maintenance



The HANNA'S MANUFACTURING CO. of FT. SMITH, ARKANSAS made excellent use of Eberhard's No. 5628 Door Lock and No. 5829 Hinges on this new Dairy Delivery Body.

• If you build or repair truck bodies, you doubtless have a recent Eberhard Catalog at your fingertips for ready reference.

IF NOT, by all means drop us a line for your copy now.

You'll find a wealth of valuable information in its many pages.



A total of 18 No. 5828 Hinges and 6 No. 5631 Door Locks help this new magnesium bakery transport type van to do a better job for RAINBO BAKERY of DENVER, COLO. Body by ELDER TRUCK & TRAILER CO. DENVER, COLORADO.

EBERHARD MANUFACTURING COMPANY
EVARTS AVE. • CLEVELAND 4, OHIO
Division of the Eastern Malleable Iron Company

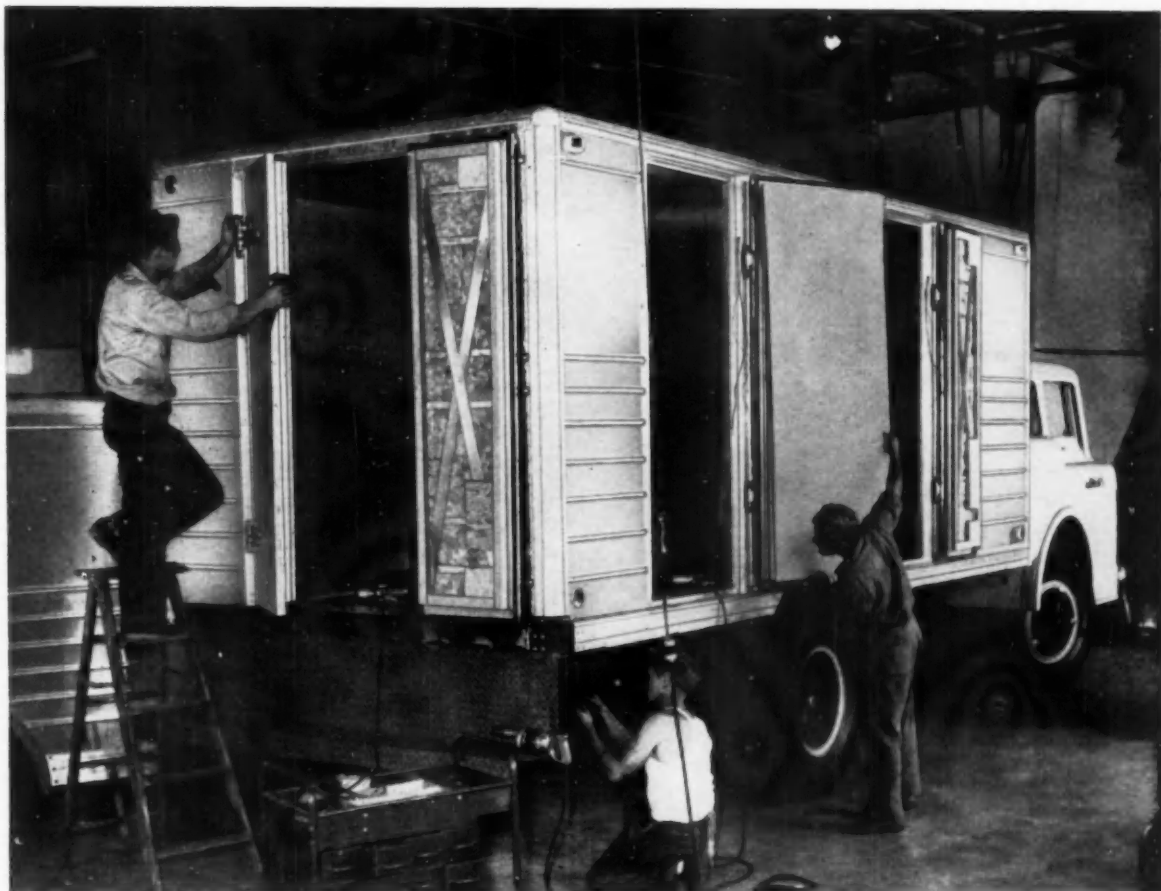
LONGRUN



TRUCK BODY HARDWARE BY
EBERHARD
THE MOST COMPLETE LINE AVAILABLE



"NOW shall we go 'Lever Boy?'"



Craftsmanship

Brown Cargo Van Body Builders are chosen for their skill in working with aluminum . . . and for the adequate facilities and trained personnel to do your job right and on schedule. They make certain each construction detail matches the high quality of Brown components to give you the finest truck bodies.

In whatever area your Brown Aluminum Body is built, you get factory-quality, Brown's custom-designed standardized aluminum body features and mass-production-pricing benefits.

Design simplicity, wide choice of size, type and style—plus craftsmanship and optional features—make Brown Aluminum Bodies the choice of leading companies in their fleet modernization programs.

Because lightweight Brown Aluminum Bodies are built by skilled, experienced craftsmen in your area, or your city, satisfaction and service is assured. Your nearby Brown Body Builder is fully equipped to give you this advantage. Use coupon below for specific information and name of your nearest dealer. Mail now!

Brown
aluminum
cargo-van
bodies

BROWN CARGO VAN DIVISION, SPOKANE, CHICAGO, READING

ECONOMIZE . . . MODERNIZE . . . STANDARDIZE . . .

CHECK STYLE: ☐ Horizontal Corrugation ☐ Smooth Panels ☐ Exterior Post

BROWN CARGO VANS . . . P.O. BOX 54 . . . SPOKANE, Washington:

Please send us: ☐ Literature ☐ Have nearest Representative call

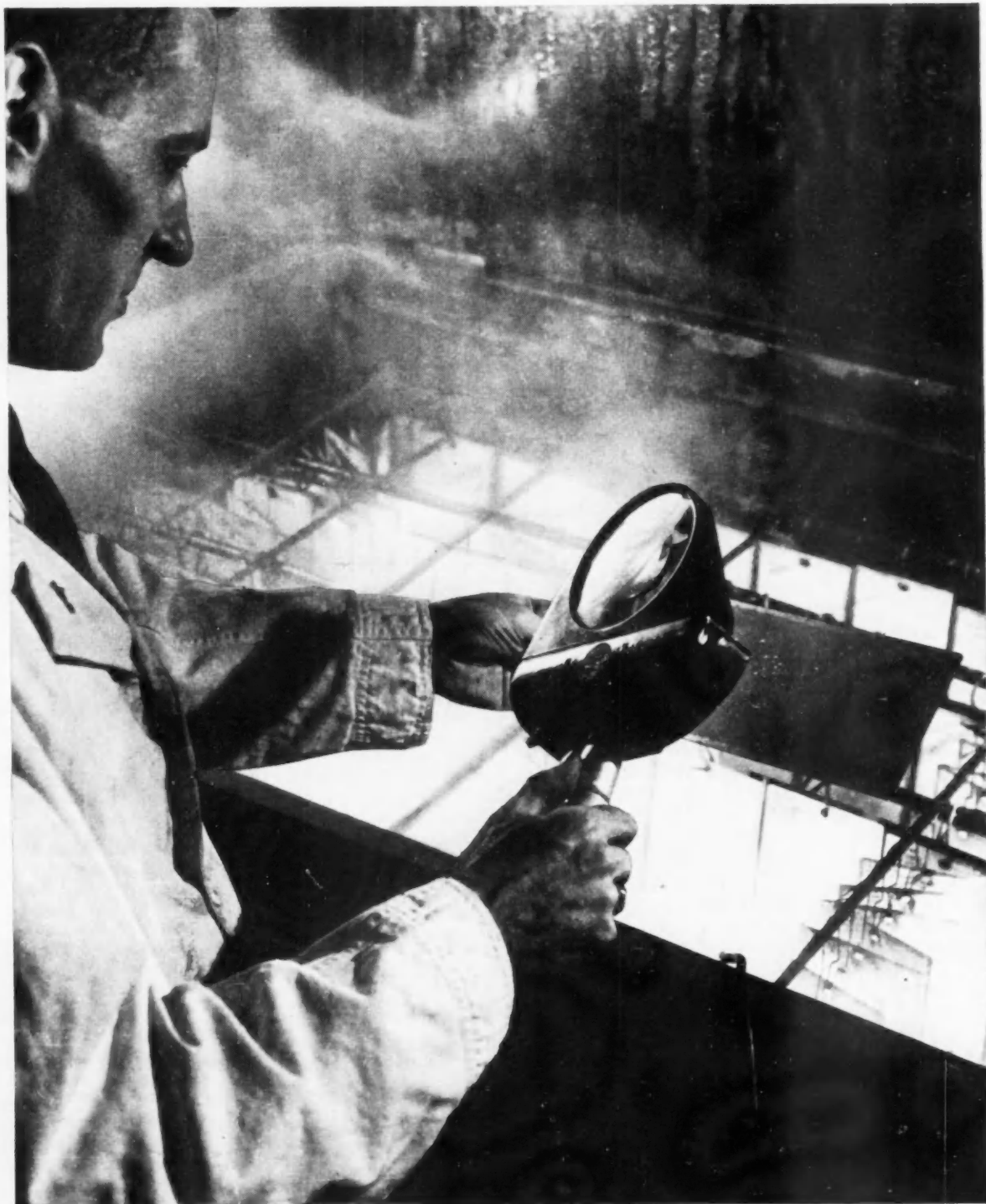
Company _____

Street and No. _____

City _____ Zone _____ State _____

Nominal Sizes	Check	Inside Lengths
9'		9'-3"
12'		11'-8"
14'		13'-7"
15'		14'-7"
16'		15'-7"
18'		17'-7"
20'		19'-7"
22'		21'-7"
24'		23'-7"

Defies damaging moisture—important



Both the heat and the humidity are fierce in the humidity cabinet where "Dulux" Enamel is tested—110° heat . . . 100% humidity. After 30 days of this, the "Dulux" test panel being examined by a Du Pont paint chemist shows no sign of blistering or paint failure.

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reason why Du Pont DULUX® Enamel is specified for leading fleets

Dew ranks with the Chinese water torture when it comes to punishing truck and bus finishes. Fleet owners know that all forms of moisture, including snow, sleet, rain and even dew, can cause corrosion, chalking . . . even blistering of the finish. And since exposure is unavoidable, fleet finishes must be highly moisture-resistant.

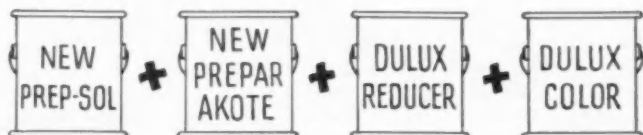
That's why "Dulux" Enamel goes through its own private torture chamber, at left. After 30 days in the humidity cabinet, where the temperature never gets below 100° F. and the humidity is a constant 100%, "Dulux" proves it can stand up to the wettest weather your fleet will ever encounter.

EQUALLY GRUELING TESTS insure resistance to chipping under hard knocks, to cracking, to ice, heat and ultraviolet light . . . make "Dulux" the *standard* of durability. And—just as important to your paint shop—another series of tests checks "Dulux" for fast-drying, bright gloss and true color.

REALECONOMY—When you put Du Pont "Dulux" on your fleet, you take advantage of the continuing experience of the world's greatest paint laboratory. That means *reliable* shop performance, *long* service life, plus a *smart* appearance on "rolling billboards" or buses that pays you a good-will bonus.

When you choose a finish to carry your company colors, make sure it will always show them at their best. Specify Du Pont "Dulux" Enamel.

IT PAYS TO USE THE COMPLETE "DULUX" SYSTEM



Du Pont "Dulux" Enamel

REG. U. S. PAT. OFF.



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

COMMERCIAL CAR JOURNAL, October, 1957



PACIFIC INTERMOUNTAIN EXPRESS is famous for fine service through tortuous terrain—from 120° desert heat to 40° below mountain blizzards. There's no greater test of truck-finish durability. And P. I. E. has used "Dulux" for the past 16 years!



VIRGINIA TRANSIT COMPANY BUSES feature interior finishes of "Dulux" in decorator colors . . . exteriors in brightly contrasting "Dulux" for long-lasting passenger appeal inside and out!



CHARLESTON TRANSIT CO. BUSES are stored outside in the dew and hot sun . . . travel through a coal and chemical plant region. The company reports "Dulux" keeps buses bright "at low maintenance cost despite the unfavorable conditions."

NOW IT MAKES SENSE TO DO YOUR OWN TOWING



the NEW Watson Towmaster mounts quickly on any tractor's fifth wheel

With a Watson Towmaster for your fleet, highway breakdowns will cost you a lot less money. You save direct tow charges, of course. But there are other big advantages in having things under your own control. You can tow out a relief tractor to get the payload moving quickly. You put the stranded driver back to work. And you bring the disabled tractor back to your own shop at a low cost per mile.

The Towmaster is heavy-duty equipment rugged enough for all highway breakdowns and most wrecks too — even big three-axle rigs. It provides excellent traction, braking and maneuverability because it puts weight on the tractive axle (or axles).



The Watson Towmaster always works, no matter how long it is stored. It has no hydraulic system to dry out, leak or seize — no electrical parts to fail from moisture or dirt. The Towmaster lifts with a winch and four part line. This simple way is surest and best in any emergency. One man alone can install the Towmaster in as little as ten minutes. One man alone does the towing too.



For further details on how the Watson Towmaster works, how it is built and how it can save you money, write for descriptive brochure. Dept. B-10.

WATSON

H. S. WATSON COMPANY
1316 67th Street
Emeryville 8, California

AMONG THE STATES

As a service to fleet operators, recent major laws affecting commercial vehicle operation both bus and truck are digested here. As reported here, the summary serves only as a guide so the fleetman may check the exact wording of the law through his state truck association or state capital to see how it affects his operation.

New Hampshire—S19 provides for auto transporter registration fees and plates. H269 increases gas tax to 6¢ per gallon.

New York—Property damage-only accidents which occur on or after Oct. 1, 1957, must be reported to the Bureau of Motor Vehicles only if there is damage of more than \$100 to the property of any one person. All reports of accidents which occur on or after Oct. 1, 1957, must be filed with the Bureau of Motor Vehicles in duplicate. Going into effect simultaneously with the new laws is a simplified, streamline accident report form which is to be used for all accidents as of Oct. 1.

Wisconsin—H708 fixes fees for registration of vehicles exceeding 68,000 lb but not exceeding 72,000 lb gross weight. S540 prescribes method for determination of truck weights. S34 sets maximum sound limit for motor vehicle mufflers at 95 decibels.

SAFETY AWARDS

Smith's Transfer Corp., Staunton, Va.—to 29 drivers for records ranging from one to nine years.

Brentwood (Pa.) Motor Coach Co.—to 15 drivers with records of from one to four years without a chargeable accident.

City Transit Lines, Eugene, Ore.—to 19 bus drivers for having driven 12 years without a chargeable accident.

Bell Lines, Inc., Charleston, W. Va.—to 104 drivers. Top man had a 20-year no-accident record.

New



Handiest Full-Output Fast Charger

\$ **99**⁹⁵
ONLY

LIMITED OFFER

Look at all these features:

SILICON RECTIFIER

5-YEAR

UNCONDITIONAL GUARANTEE

The Silicon rectifier used in the new portable Exide Fast Charger—Model EX-353B—eliminates the major causes of fast charger failures. It is smaller, more efficient, more rugged than the rectifiers used heretofore . . . and it lasts longer. In its heavy metal housing, it is completely protected against damage from moisture, dirt or acid fumes. This Silicon rectifier is guaranteed unconditionally for 5 years.

CHARGING RATES 6V—100 Amps., 12V—50 Amps.

SILICON RECTIFIER Unconditionally Guaranteed for 5 Years

COMPACT Weighs only 37 pounds . . . Size: 11½" x 10¾" x 10¾"

PUSH BUTTON CONTROL Easy to operate. Push buttons select fast or slow charging rates.

ELECTRIC TIME SWITCH Accurate control of charging time.

OVERLOAD CIRCUIT BREAKER protects against overload and reverse battery connections.

115 VOLTS . . . 50/60 CYCLES AC

ACT NOW . . . CALL YOUR EXIDE DISTRIBUTOR OR MAIL THIS COUPON

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AUTOMOTIVE DIVISION
Cleveland, Ohio

Exide Automotive Division
P.O. Box 6266, Cleveland 1, Ohio
Tell the nearest Exide Distributor to get in touch with me.

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Address _____

City _____ Zone _____ State _____



'69 EXTRA PROFIT every 10,000 miles with every Dayton-equipped rig

Stronger, Lighter Dayton Thorobred Tires save an average of 241.2 lbs. for extra payload on a tandem tractor trailer. At average ton mile rates† that means \$69 every 10,000 miles . . . slightly more than 2/3c per mile in *extra payload profit!* Multiply that by the number of rigs in your fleet and you have a "dollars and sense" reason to switch to Dayton Thorobreds.

Here's why Dayton Thorobred Tires save so much weight: they are Stronger—a full 30% stronger than the average of 4 other leading 10-ply (12-ply rating) first line tires of similar size.

This extra strength of new Super Cordura 8-ply (12-ply rating) Construction permits the removal of excess heat producing bulk . . . lowers weight . . . reduces tire destroying heat. Result: Dayton Thorobreds are both Lighter, Stronger and *much longer lasting*. They give more original miles, take recap after recap. So profits rise from lower cost per mile, too.

And with Dayton Thorobreds you get all these premium tire advantages at regular tire prices.

Make sure you get every possible penny of payload profit out of your fleet. Equip all your rigs with Lighter, Stronger Dayton Thorobred Tires. And specify them on your new vehicles too.

For full details on what new Dayton Thorobred Tires can mean to you in payload profit call your nearest Dayton Distributor, or write for a free copy of "Increase your Profits 2 Ways" The Dayton Rubber Company, Tire Div., Dayton 1, Ohio.

EXTRA PAYLOAD PROFIT

Type and Size	Dayton Thorobred Highway Extra Mileage 5 Rib Super Cordura	Average Other Brands, Rayon	Extra Payload Per Unit*	Extra Payload Per 100 Unit Fleet
Tube-type 10-00-20	115.3 lb.	128.7 lb.	241.2 lb.	24,120 lb.
Tubeless 11-22.5	108.3 lb.	118.3 lb.	180 lb.	18,000 lb.

†Based on statistics of a leading trucking publication.
*Based upon a typical 18 wheel tandem tractor-trailer.



A Complete Line of Truck and Passenger Car Tires in Nylon, Super Cordura and Rayon

© D. R. 1957

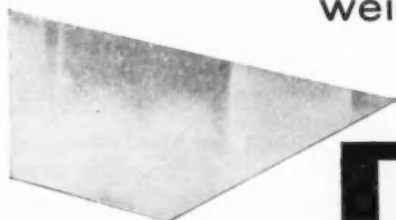


Dayton Thorobred Tires



JALTEN low alloy high-strength J & L steel

provides
equal strength
with lighter
weight



Jalten permits high design loads with reduction in section. Usual reduction is two gages with weight saving as much as 25%.

High strength of Jalten is the result of balanced chemical composition which is carefully controlled during production. Jalten's strength is retained through fabrication and welding without further heat treatment.

Jalten is available in the forms you require (plates, hot rolled sheets, hot rolled bars, small shapes and structurals). Jalten can be purchased in three grades to meet specific requirements for high strength, formability, impact, resistance to corrosion.

Your local distributor can supply you with information on Jalten, or you can write direct to the Jones & Laughlin Steel Corporation, Dept. 432, 3 Gateway Center, Pittsburgh 30, Pennsylvania.

Jones & Laughlin
... a great name in steel

Congress Left Much for January

Continued from Page 90

Freight Forwarder Permits

Public Law 85-176, formerly S1383, amends Section 410 of the IC Act, affecting the requirements for getting a freight forwarder permit. In effect, it gives ICC a somewhat firmer control over the awarding of operating permits.

Generally, the agency can deny a permit for the reason that shippers in the applicant's area have sufficient service. One exception to this authority, though, prevents ICC from taking this action where railroad subsidiaries are concerned. This exception, as ICC

has pointed out, gives railroads and their allied firms a preferred status.

Motor Carrier Stock

Public Law 85-309, formerly HR3625, amends the IC Act to prevent carriers from using arbitrary par values of stock to evade ICC jurisdiction. Under this law, the "fair market value" of the stock is to be considered in judging if an issue is large enough to come under ICC control.

Section 22 Rates

Public Law 85-246, formerly S939, requires carriers handling government shipments to file their Sec. 22 rate quotations with ICC. Filings are for public inspection only, and not for ICC approval.

In effect, then, the law will have no bearing on rates quoted to a government agency for a specific shipment. The law does serve to protect carriers against complaints of monopolistic practices in rate-setting.

In January . . .

Left over for January are some 10 proposals, some more likely than others to see a lot of action. In brief, here's what you could be hearing about when Congress meets again. . . .

- HR5825 and S1677—Redefine private motor carrier.
- HR5823 and S1689—Narrow agricultural exemption.
- HR5664 and S1490—Ask for registration of private and exempt motor carriers.
- HR6084 and S1720—ICC registration of state certificates.
- HR5661 and S1458—Allow ICC to issue limited term operating authority.
- HR5660 and S1459—Affect common carrier charter rights.
- HR5662 and S1460—Permit ICC to extend temporary authority beyond 180 days (withdrawn but could be reintroduced).
- HR5331 and S1461—Affect revocation of carrier operating authorities.
- HR4393 and S1382—Control relationship of motor carriers and freight forwarders.
- HR5629 and S1491—Revise Transportation of Explosives Act.

END

Please Resume Reading Page 92

for greater safety

scientific light pattern from new K-D turn signals

K-D engineers after two years of research have pioneered the last word in Class A Turn Signals. The colorfast 4 1/4" Lucite lens is designed to produce maximum candle power with perfect SAE pattern . . . places all available light where it belongs . . . without waste. Lens secured by four screws . . . gasketed for weather-tight service. Bellows type rubber grommet encases lead wires . . . positive contact . . . moisture proof. Heavy gauge body with reinforcing plates. Available in black enameled bonderized steel or highly polished chrome. **KD 752** may be used as Turn Signal, Stop and Tail Lite.

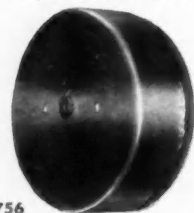


KD 752

KD 753 Two Face Turn Signal controls rays so that no blinding light from rear lens can strike driver's eyes! **KD 756** . . . bolt mounted on any flat surface . . . can function as Turn Signal, Stop and Rear Lite. Two mounting holes on 2" centers for 1/4" bolt or metal screw mounting. **KD 750** Signal Set includes two KD 752, two KD 753, flasher, mounting brackets and wire. Switch not included.



KD 753

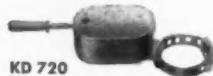


KD 756



KD 722

CLASS A SWITCHES
fused for burn out
proof operation.



KD 720

The Complete Line Turn Signals, Stop and Rear Lites, Truck Mirrors, Reflectors, Clearance Marker Lites are representative of K-D's single-source service.

K-D LAMP COMPANY

1010 ELM STREET • CINCINNATI 10, OHIO
WAREHOUSES: ATLANTA • BOSTON • CHARLOTTE • CHICAGO
DALLAS • KANSAS CITY • LOS ANGELES • MEMPHIS • MINNEAPOLIS
NEW YORK • PHILADELPHIA • SAN FRANCISCO • SEATTLE • TORONTO



For Plus-Traction and Plus-Safety, hundreds of Fleets rely on *Penetred* Steel Coils!

HERE'S HOW THEY WORK



CONTINUOUS PENETRED THERMO DUCTOR
COILS MOULDED IN THE TREAD QUICKLY
FORM THOUSANDS OF STEEL GRIPPING
CLAWS

Penetred "PLUS-PROTECTION"
AVAILABLE IN RECAPS THROUGH
YOUR LOCAL SUPPLIER . . .
OR
IN NEW TIRES FROM GOODYEAR
TIRE & RUBBER COMPANY UNDER
THE NAME "STEEL GRIP"®

"STEELGRIP" IS A REGISTERED TRADE MARK
OF GOODYEAR TIRE & RUBBER CO.

READ HOW ONE TRUCKER CUTS COSTS
AND INCREASES EFFICIENCY
WITH PENETRED . . .

STEFFKE FREIGHT COMPANY
BOX 748
WAUSAU, WISCONSIN

Penetred Corporation
104 West Arnold Street
Marshfield, Wisconsin

January 3, 1956

Attention: Robert Felker
Dear Sir:

I thought you might be interested in our experience with "Goodyear Steel Grip Tires" and "Penetred-Kurv" recaps, both using Penetred wire.

We find great improvement in traction over standard highway treads. With this improved traction on ice, we find these tires eliminate many service calls to get trucks that are stuck on hills or alleys and at loading docks, and also eliminates the need for drivers to look for a source of sand or ashes when stuck. Many of our drivers ask us to put these tires on their tractors. To obtain greater cornering force, we use "Goodyear Steel Grip" on the front wheels of six-wheel tractors and short wheel base cab-overs to prevent the front ends from sliding out on turns, particularly on wet asphalt and ice. This has been very successful.

Fewer repairs are needed to the carcass of these tires when recapping. The wire seems to stop the sharp stones that cut into the cords and damage the carcass. Mileage wise, these tires are equal to, or better than the standard tire. From the additional traction, we anticipate a considerable, intangible saving in the form of improved service, labor savings and accidents prevented.

Yours very truly,

STEFFKE FREIGHT COMPANY
William Felker

WG:hh

"I'm Penny"

c P.C. '57

COLOR-SOUND MOVIE TELLS THE STORY

... ORDER FREE LOAN FILM TODAY!

Penetred®
CORPORATION
MARSHFIELD, WISCONSIN

**PENETRED CORPORATION
MARSHFIELD, WISCONSIN**

YES! I'd like to see actual films of University conducted tests of Penetred Steel Coil Truck tires under brutal weather conditions. Please send a loan print of your color-sound movie which we will return after viewing.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

Whatever the
cargo or job—
these fleets . . .



Photo courtesy of Gerlinger
Carrier Co.



Photo courtesy of the White
Motor Co.

roll up steady profits with dependable

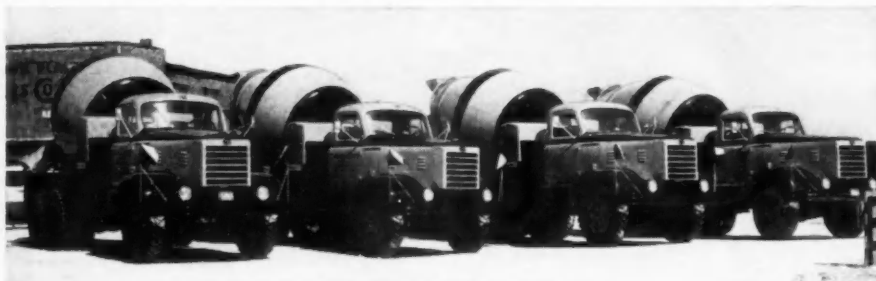


Photo courtesy of the Four
Wheel Drive Auto Co.

BLOOD BROTHERS Propeller Shafts

Here are fleets of three kinds . . . each specialized for its purpose. But all three have one advantage in common. They're all equipped with rugged, dependable Blood Brothers Propeller Shafts.

The reason is simple. Blood Brothers Propeller Shafts have proved they will deliver maximum engine torque smoothly—and give outstanding trouble-free service year-after-year.

Seldom requiring attention, they make a hit with profit-minded fleet owners. So—whether you build trucks or operate them—you can depend on Blood Brothers Propeller Shafts to help keep down-time *down* and fleet earnings *up*!

Write now for specific data—we'll gladly cooperate.



**BLOOD BROTHERS
MACHINE DIVISION**

ROCKWELL SPRING AND AXLE COMPANY

ALLEGAN, MICHIGAN

UNIVERSAL JOINTS
AND DRIVE LINE
ASSEMBLIES



Improve your cargo-freezer efficiency with

RUBATEX FLOATING FLOOR INSULATION CONSTRUCTION

Design Guide for Freezer Trucks, Trailers and Vans

STEP BY STEP DESIGN OPERATIONS

1. Lay plywood ($\frac{1}{4}$ " or $\frac{3}{8}$ " thickness—exterior grade) on bolsters of truck body. As an alternate metal or masonite, $\frac{1}{8}$ " or $\frac{1}{4}$ " can be used.

2. Coat underside and edges of plywood with emulsion or water dispersed type of adhesive. Avoid use of adhesive mixed with solvent.

3. Bolt or rivet plywood to bolsters.

4. Coat top side of plywood with same adhesive (adhesive water-proofs plywood and is also a preservative.)

5. Cement edges only of first layer of 2" thick Rubatex Insulation Hardboard (heavy coat.) Apply first layer of Rubatex over entire floor. Tight joints necessary. Recommended size—2" x 27" x 54", R-103-S, 4.5 lbs. density.

6. Use 2" thick x 12" wide pieces of Rubatex. Cover with adhesive on all sides and place on edge next to outside wall. (Make tight fit.)

7. Cement edges of second layer 2" thick Rubatex for floor. Place directly on top of first layer. Stagger all joints.

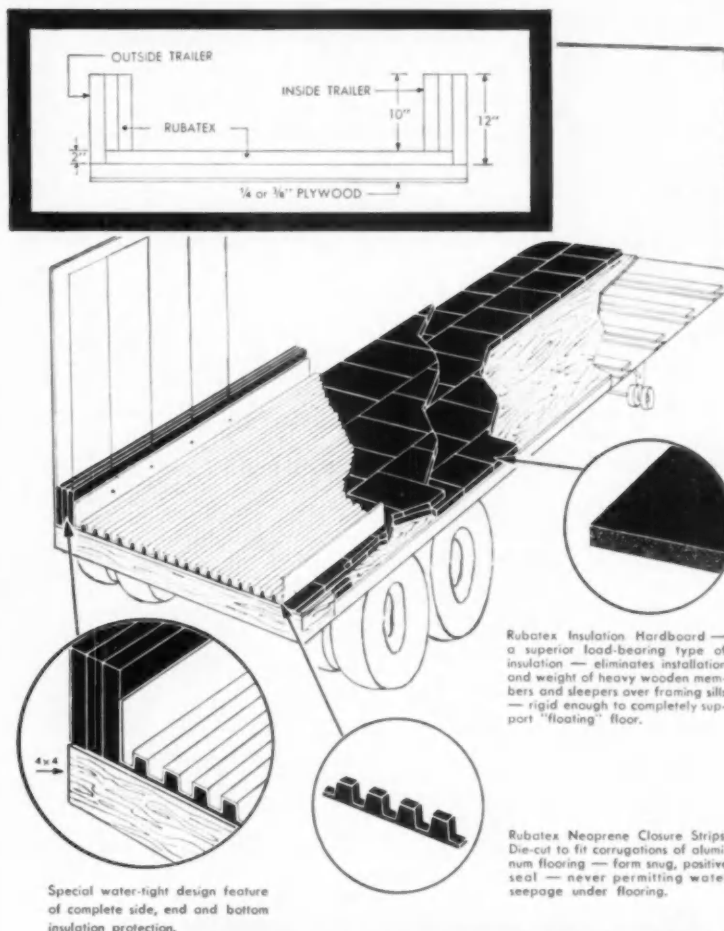
8. Use 2" thick x 10" wide pieces of Rubatex covered with adhesive on all sides. Place two layers of this thickness on edge next to first thickness that has been applied next to outside wall. (Make tight fit.) Stagger all joints.

9. Place extruded aluminum flooring of type manufactured especially for refrigerated trucks directly on top of Rubatex Insulation. Bolt floor down at back end in joints of aluminum flooring to bolster by using $\frac{1}{4}$ " roundhead carriage bolts. (May be necessary to bolt floor at side door in same manner.) Bolt section of aluminum flooring that extends up side wall 7" to inside walls of truck or trailer.

10. Seal the ends of extruded flooring with Rubatex, Stock R-217-H, closure strips. Closure strips should be applied as flooring is being placed in position. These closure strips will prevent water seepage beneath aluminum floors.

NOTE: These are proposed operations—to help you in your design for better efficiency in your freezer cargo truck, van and trailer floor insulation construction.

WRITE US for any further help you might need—for case history applications on how Rubatex Insulation Hardboard can make more cents in better performance for you.



- "K" Factor 0.21
- Zero Moisture Pick-Up (0.275)
- No Vapor Barrier Needed
- Light Weight — 4.5 p. c. f.
- Average Compressive Strength — 60 p. s. i.

G. A. I. **RUBATEX**
INSULATION HARDBOARD



RUBATEX DIVISION, Dept. C-10
GREAT AMERICAN INDUSTRIES, INC.
Bedford, Virginia

11 Doors to Fast Service . . .

Continued from Page 77

maintenance schedule for specific trucks. They may not be around when the time comes. However, says Kirschenbaum, "Sound preventive maintenance is the key to high equipment utilization, reliability and fewer scheduling head-

aches." And here's how he works his fleet maintenance . . .

Neptune owns virtually all of its 75 two-axle vans, 150 tractor-trailer combinations and its many passenger cars (used by its representatives). Most loads are out of

or into the New York City metropolitan area. Transfer of cargo from vans to semi's for the road haul is usually done at night at a covered loading dock adjacent to the new shop. The greater part of the maintenance routine takes place between dusk and dawn.

A master service record sheet is filed on each tractor-trailer, van, and passenger car. This file is the pulse of the garage work load and operation efficiency. Each truck master sheet contains all the items for periodic mileage inspections separated into "services" numbered "1" through "5." Each inspection cycle is based on 3000 miles of operation. As the inspection items are accomplished the master sheet requires the mechanic's signature plus that of the inspector or maintenance supervisor.

At 4:30 PM each day, Kirschenbaum pays a visit to the Traffic Dept. There he is supplied with a list of equipment both "inbound" and "outbound" for the next 24-hr period. Maintenance master sheets are then pulled for each vehicle expected. The 24-hr maintenance work load begins to take shape.

Clipped to the

master sheet may be "hold over" items and the drivers' reports. Vehicle time as well as vehicle mileage are surveyed since wheels are serviced on the basis of hours. Special items and drivers' report items are placed in one of two categories, (1) those which *must* be completed before equipment departure from a safety standpoint, and (2) those which are necessary but not essential to safety or to be considered cause for delay.

Once the master sheet is completed for a specific piece of equipment calling out the routine and special items it is placed in one of four work folders that carry the following titles:

1. DAY MUST—Notify Traffic if cannot be completed.
 2. NIGHT MUST—Notify Traffic if cannot be made usable.
 3. MAJOR WORK IN PROGRESS—Not on Traffic's usable list.
 4. MAJOR WORK NEEDED—
- (TURN TO PAGE 198, PLEASE)

PENN BODY offers YOU a profitable 20 TON PAYLOAD for PENNSYLVANIA

And HERE'S HOW you can haul more with the weight-saving PENN ALUMINUM TRAILER BODY and front mounted hoist . .

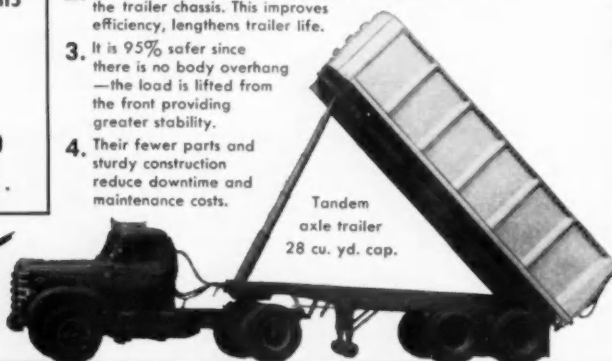


Pennsylvania Gross 60,000 lbs.
Less Penn Aluminum
Body and Hoist 19,400 lbs.

YOUR BIGGER PAYLOAD 40,600 lbs.

**TRUCKERS
KNOW THIS
ABOUT
PENN
FRONT-
MOUNTED
HOISTS . . .**

1. The single hoist weighs less and fewer parts are needed for its installation.
2. More weight is placed on the tractor axle and less on the trailer chassis. This improves efficiency, lengthens trailer life.
3. It is 95% safer since there is no body overhang—the load is lifted from the front providing greater stability.
4. Their fewer parts and sturdy construction reduce downtime and maintenance costs.



Your Inquiries are welcome

**Truck Body Specialists with 23 years
experience in the use of telescopic hoists**

PENN BODY DIVISION

**HOCKENSMITH
CORPORATION**

PENN, PA. Call: Jeannette, Pa., Lafayette 3-5401 . . . Pittsburgh, Electric 1-1242



NOW! The Big Weatherhead Line
is even bigger.....they've added

AIR BRAKE FITTINGS

HOSE and HOSE ENDS



FOR TRUCKS, TRACTORS,
TRAILERS, BUSES,
OFF-THE-ROAD EQUIPMENT

This new Weatherhead line is identical to and fully interchangeable with fittings on any other standard air brake system. Same high quality for which all Weatherhead products have long been known.

Order Now!

Catalog, price lists and complete stocks are now available through your nearby Weatherhead supplier.



WEATHERHEAD

THE WEATHERHEAD CO., FORT WAYNE DIVISION
Dept. C-10, 128 W. Washington Blvd., Fort Wayne, Ind.
In Canada: The Weatherhead Co., Ltd., St. Thomas, Ontario





DROP HEAVY MAINTENANCE COSTS...

* Photo Courtesy of
AKERS MOTOR LINES, INC.
Users of WIX CARTRIDGES

WITH *wix*[®] HEVI-DUTY OIL FILTERS!

Lower maintenance costs and less maintenance time add up to a more profitable fleet operation. It's the vehicle *on-the-road* that makes the money!

WIX Oil Filter Cartridges keep motor oil clean!—protect your engines from damaging dirt, grit, and gummy sludge, and keep your fleet functioning at peak performance. WIX makes HEVI-DUTY Cartridges for every filter-equipped gas or Diesel engine, for lube and fuel oil systems, on every truck, bus, passenger car or other equipment.

Rely on WIX for top filtration efficiency and economy—get the FREE Survey of all your filter requirements, and an Inventory Control made-to-order for your fleet. Save—the low cost WIX-PAX way! Call your local WIX Jobber, or write us directly, TODAY!



FREE:

Oil Filter Survey that lists correct WIX replacement Cartridges for every piece of your equipment, plus Inventory Control.



Fleet Manual for a continuing record on every engine... maintenance, repair, performance... at a glance!

wix[®]

OIL FILTERS AIR FILTERS
AUTOMOTIVE • INDUSTRIAL • RAILROAD
WIX CORPORATION • GASTONIA • N. C.

In Canada: Wix Accessories Corp. Ltd., Toronto



WIX-PAX

...the money-saving service for fleets... delivers genuine, first quality WIX HEVI-DUTY Cartridges with gaskets, direct from WIX factory or nearest WIX warehouse. Shipments prepaid in full cartons of 100 pounds or more, with billing thru your local supplier.



Out OF YOUR MAINTENANCE SHOP . . .



Versatile, dependable and rugged, a Bay-Lift requires a minimum of maintenance. Little attention is required except for an occasional lubrication of the fittings.



3 to 5 EXTRA jobs a day with **BAY-LIFT**[®]

A Bay Portable Air Lift adds speed and efficiency to your maintenance shop by getting trucks or trailers up in the air faster and by permitting new speed and convenience while the mechanics work...increasing shop output to the tune of three to five jobs a day!

A Bay-Lift can be used wherever an air hose will reach—indoors or out, upstairs or down—eliminating bottlenecks and waste time of moving trucks, cabs, trailers and cars to stationary lift equipment. Once the vehicle is up, the air hose can be disconnected and used with other tools. Bay-Lift double locks—automatically—in any raised position.

A Bay-Lift is more efficient because the mechanic looks AT his work instead of straining UP to it.

A Bay is like an extra mechanic in the shop, but costs less than the pay a good mechanic earns in a month. From the first day a Bay is used it starts paying for itself...helping keep maintenance costs down and fleet units out making money.

BAY LIFT[®]

DIVISION OF LIFE TIME PRODUCTS CORP.
P.O. Box 85-C10, Canfield, Ohio

Bay Overseas Division, 276 West 43rd St., New York 36, N. Y.
Cable Lapreh, New York

Copyright 1957 by Bay Mfg. Div., Life Time Products Corp.

11 Doors to Service

Continued from Page 194

Do not start without notifying Traffic. Traffic advised to bring these units in.

In addition to the four work folders a yellow sheet is prepared for quick reference showing truck numbers under column headed (1) Lube Lane, (2) Tune up, (3)

Safety Lane, (4) Miscellaneous. When the night maintenance supervisor checks in his work load is ready and waiting!

In Neptune's moving operations, each truck is assigned a crew of four men—one driver and three helpers. These men are paid by the hour at a relatively high rate. For this reason, when the crew arrives for a van, any shop equipment delays are espe-

cially costly. Neptune reduced these overhead losses by introducing a morning "run-up." This is a final pre-departure run-up handled by one of the best mechanics who reports at 6:00 AM in the morning.

If any problems develop caused by overnight parking in excessive heat, rain, or freezing cold that might delay the departure, Traffic catches the crew before they leave home and advises them to "stand-by." Savings incurred by this last minute run-up make the special shift well worth while. In fact during winter when battery troubles and hard starting are common, the expert trouble shooting mechanic is assigned a helper.

Even so, trucks do get far afield on irregular routes, often don't get back home for six weeks. Kirschenbaum keeps track of where they are through Neptune's five traffic control centers. Drivers on the road must check into one of these daily. The traffic control center reports to New Rochelle headquarters through TWX.

Included in this daily check is a report of all gas purchased and vehicle mileage. Thus Kirschenbaum can authorize needed lube and oil change if the rig will not be back in New Rochelle on time.

Periodically the master maintenance file is checked through to locate equipment that has not been scheduled into the New Rochelle base for regular inspections. Area Control is notified by TWX to advise the driver on his next call-in to have a particular service accomplished by an outside agency (White, Fruehauf, etc.) Only authorized service stations are used and a purchase order is immediately issued for the service station nearest the driver's location.

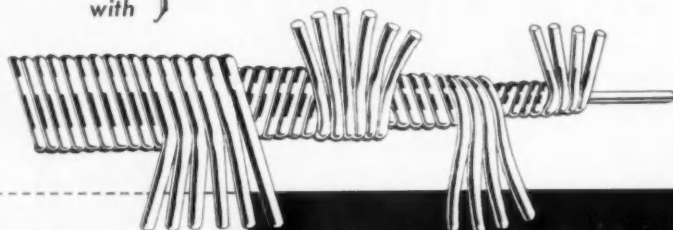
Supplementing the fleet center service at New Rochelle, and the special work done on the road is a steady stream of written "maintenance bulletins" from the Fleet Maintenance Supervisor to the drivers. These generally are clipped to the driver's pay check to attract attention.

END

Please Resume Reading Page 78

Replace worn
or broken
speedometer
flexible shafts
with

STEWART-WARNER FLEXIBLE SHAFTS



STEWART-WARNER
**21-strand
core**

**...used as original
equipment on leading
makes of trucks and
passenger cars!**

Insist on Stewart-Warner—the *quality* line of core and casing—products of over 50 years of experience in supplying speedometers and speedometer drive equipment to the leading car, truck and bus manufacturers!

Cut maintenance costs—benefit by the important extra advantages of Stewart-Warner 21-strand core construction:

Less "Backlash!" All flexible core will show some torsional deflection or "backlash" under load . . . but careful control of winding operations, combined with rigid standards of inspection, insures a minimum

backlash in Stewart-Warner core.

Non-Raveling! Stewart-Warner core will not ravel when cut. Uniform throughout entire length, regardless of whether tips are put on at the factory or in the field.

Flexible! Correct tension is applied during winding—so that core is soft enough for easy handling and silent operation, yet hard enough to give maximum wear resistance.

Uniform! Top Quality! Careful inspection and manufacturing control is your assurance of the long service life for which Stewart-Warner products are famous.

See your Service Station Operator, or call Your
Stewart-Warner Distributor today!

STEWART-WARNER

Instrument Division, Dept. UU-107
1840 Diversey Parkway, Chicago 14, Illinois

Specify

End battery and electrical breakdowns

Leece-Neville ALTERNATOR SYSTEMS

THE BEST GENERATOR EQUIPMENT YOU CAN BUY!



Leece-Neville alternators supply ample electric current to permit full use of all lights, accessories and radios . . . at all vehicle speeds. Unlike conventional generators, L-N alternators start charging as soon as the engine is started and deliver maximum output at low engine speed.

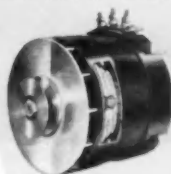
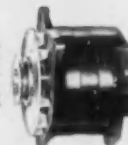
Whether your operation is stop-start, over-the-road, or a combination involving heavy city traffic, you'll find an economical L-N generating system exactly suited to your requirements.

You can eliminate electrical failures on the road, cut maintenance costs and boost operating efficiency with LEECE-NEVILLE ALTERNATORS . . . available as factory-installed original equipment or as replacements through L-N field service distributors, located in all principal cities.

A.A. 6786

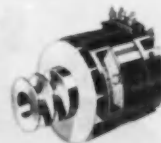
3 L-N ALTERNATOR SYSTEMS . . .

L-N STANDARD Alternator, with companion regulator and rectifier . . . an extremely popular generating system because of its universal adaptability and low price. L-N STANDARD Alternators are widely used on passenger cars, light and medium duty trucks, school buses, taxicabs and police cars. Both 6 and 12 volt systems are offered.*



L-N HEAVY-DUTY Alternator, with companion regulator and rectifier . . . supplies 95 amperes at 6 volts; 50, 60 or 100 amperes at 12 volts.* Added advantages include unusually high output at idle . . . also can provide up to 1200 watts of mobile 110 volt power. Used on passenger cars, trucks, buses and emergency vehicles of all types.

L-N EXTRA HEAVY-DUTY Alternator, with companion regulator and rectifier . . . provides 60 to 95 amperes at 6 volts; 60, 100 or 125 amperes at 12 volts.* Especially designed for multiple-belt drives and severest operating conditions, either over-the-road or off-highway. Bonus features include 1200 watt mobile 110 volt power supply. Generally used on heavy trucks, buses, large emergency and off-highway units.



* L-N 24 and 32 volt alternator systems also available.

**YOU CAN
RELY ON**

**Leece-
Neville**

THE LEECE-NEVILLE COMPANY • CLEVELAND 3, OHIO

Manufacturers of Automotive Electrical Equipment since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



ALTERNATOR SYSTEMS



D.C. GENERATORS



REGULATORS



CRANKING MOTORS



SWITCHES



SMALL MOTORS

In
experienced
hands...



IMPACT WRENCHES



SCREWDRIVERS



VALVE REFACERS



ELECTRIC DRILLS



that's where you'll find...



Power Tools!

ALBERTSON & CO., INC.

SIoux CITY, IOWA, U.S.A.



ELECTRIC DRILLS • SCREWDRIVERS • SANDERS • GRINDERS • IMPACT WRENCHES • VALVE FACE GRINDING MACHINES • FLEXIBLE SHAFTS • ABRASIVE DISCS • POLISHERS • PORTABLE SAWS



"We specify HENDRICKSON tandems for weight savings, low maintenance . . ."

Rogers Cartage Company

"We have been using Hendrickson Tandem Suspensions for years. We specify Hendrickson Suspensions on all our tractors for weight savings, an easier ride and low maintenance," says W. E. Johnson, Exec. Vice President and General Mgr., Rogers Cartage Company, Chicago.

The Rogers Cartage Co. gasoline and chemical hauling operations annually cover over 17,000,000 miles . . . a series of continuous starts and stops through the entire Chicago industrial area. The company's 45 Model T800 Ford Tractors are equipped with Hendrickson RSAA Suspensions. Hendrickson's alumi-

num construction, coupled with the rubber "load cushion," provides a light weight, dependable suspension, and gives a soft cushion ride to the loaded tank trailer.

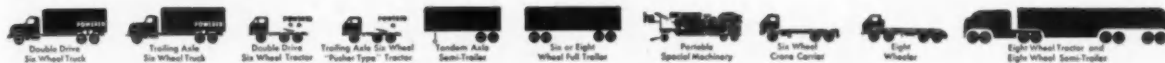
Alignment is accomplished by the 4 vertical drive pins encased in rubber bushings. The bushings permit the drive pins to move up and down in direct relation to the movement of the rubber load cushions.

. . .

You too can convert tractor weight into payload weight with Hendrickson Tandem Suspensions. Call Hendrickson now for complete information on your application.

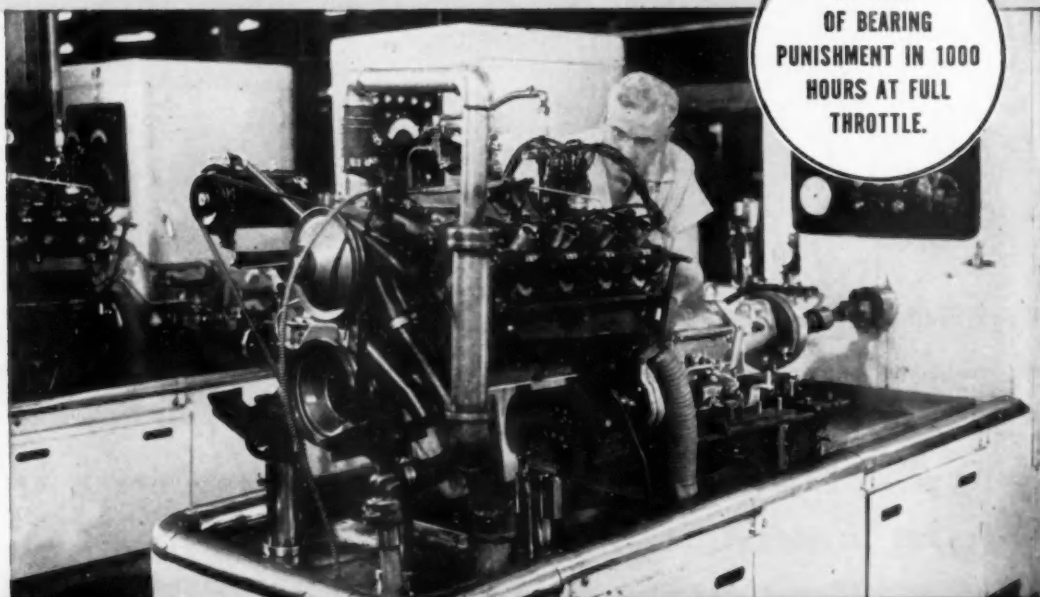


HENDRICKSON MFG. COMPANY
8001 WEST 47th STREET
LYONS (Chicago Suburb), ILLINOIS



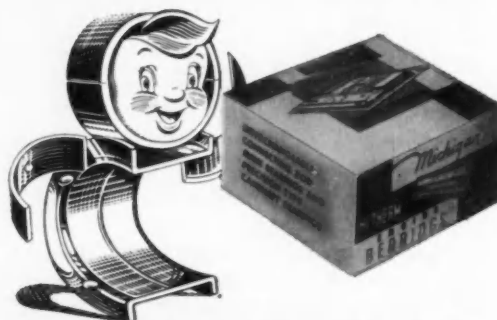
"SURVIVAL TEST"

**YOU WANT ENGINE BEARINGS
THAT CAN LIVE THROUGH
TESTS LIKE THIS...**



**10 YEARS
OF BEARING
PUNISHMENT IN 1000
HOURS AT FULL
THROTTLE.**

Original equipment customers frequently require the engine bearings we manufacture to survive the tests that equal thousands of trouble-free miles. Our original equipment experience since 1925 assures your customers of complete satisfaction. See your jobber for Michigan Hi Therm Engine Bearings.



DETROIT ALUMINUM & BRASS CORP.

DETROIT 11, MICHIGAN

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of s
Ohio
TH
(Tex
town
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Ralph Auvil, formerly superintendent of safety, has been named director of safety of Motor Cargo, Inc., Akron, Ohio.

The entire fleet of buses on Dallas (Texas) Transit Co.'s popular downtown Shoppers' Special route was air conditioned for August operation.

Aero Mayflower Transit Co. has named eight new agencies to its network. They are Gem Van and Storage Co., Hartford, Conn., McLaughlin Transfer Co., Lowell, Mass., Granville Bonded Warehouse, High Point, N. C., Dalby Transfer & Storage, Colorado Springs, Colo., Alber Transfer, Inc., Norfolk, Neb., Tucumcari Transfer & Storage Co., Tucumcari, N. M., and Dalby Transfer & Storage, Inc., Amarillo, Texas.

Ward Trucking Corp., Altoona, Pa., will sponsor for local broadcast the radio reports of the Penn State University football games this fall.

ET&WNC Transportation Co., Johnson City, Tenn., has added 20 new White 9000 tractors powered by Cummins JT-6-B engines to its fleet.

National Alfalfa Dehydrating and Milling Co., Kansas City, Mo., has purchased 61 GMC trucks for its operations in 14 states.

Safeway Trails, Inc., Washington, D. C., and Virginia Stage Lines, Charlottesville, Va., have purchased Trailways of New England, subject to approval by the Interstate Commerce Commission.

Ringsby Truck Lines, Inc., Denver, Colo., has added dromedary-tractor units on eastern runs. Known as "Pent House Sleepers," the tractors have 8½-ft dromedary units mounted on the tractor's frame behind the cab-sleeper compartment.

Archer-Daniels Midland Co., Minneapolis, Minn., has added 20 new International Model No. VCO-205 truck tractors to its fleet to haul linseed, soybean and fish oils, chemicals, dehydrated alfalfa, feeds and flour.

Yellow Transit Freight Lines, Inc., is placing an additional 80 over-the-road units into service. Cummins JT-6-B diesel engines power the cab-beside-engine Kenworth trucks which pull Fruehauf aluminum high cube trailers. Yellow Transit also nearly doubled the size of its operation recently with the annexation of Michigan Motor Freight Lines, Inc.

Dale Dimmitt has been appointed general manager of Eck Miller Transfer Co., Denver, Colo., and will continue to manage the Denver-Chicago Trucking Co., Inc., Denver terminal.

A test of the two-way radio systems between dispatchers and city bus drivers is being carried out in Rochester, N. Y., and Cleveland, Ohio. Rochester is testing Stromberg-Carlson equipment in 25 buses and Cleveland Transit System is using RCA radios in six new buses.

When a fire occurred at a farm near Watertown, S. D., Dan Dugan Oil

Transport Co. hauled 8500 gal of water to the blaze in order to permit the fire department from Watertown and Henry to bring the blaze under control. It took the firemen more than seven hours to put out the fire.

R. C. Dolan has been appointed a local driver supervisor for Pacific Intermountain Express at its Emeryville, Calif., terminal.

Mason and Dixon Lines, Inc., Kingsport, Tenn., has ordered 30 GMC F375 trucks and 20 GMC F451A highway tractors. All are COE models. They will operate out of New York City.

FAST ★ CLEAN ECONOMICAL



Outfit (illustrated) comes complete with hose, precision handle, "Y" connection, and interchangeable stems ready for use with standard welding cylinder.

With the four different sized stems and soldering iron in this outfit you can handle any job from the heaviest body soldering down to the smallest spot repairs. Use it as an auxiliary to your standard oxy-acetylene welding and cutting outfit. Just attach the "Y" connection to the outlet of your acetylene regulator and operate both outfits from the same cylinder. The precision torch has a convenient shutoff valve and pilot flame control built into it for economical operation. Ask your local LINDE jobber for a demonstration or write for more details to LINDE COMPANY, Division of Union Carbide Corporation, 30 E. 42nd St., New York 17, N. Y. In Canada: Linde Company, Division of Union Carbide Canada Limited, Toronto.

GET IT FROM YOUR

LINDE JOBBER

The terms "Prest-O-Lite" and "Linde" are registered trade-marks of Union Carbide Corporation.

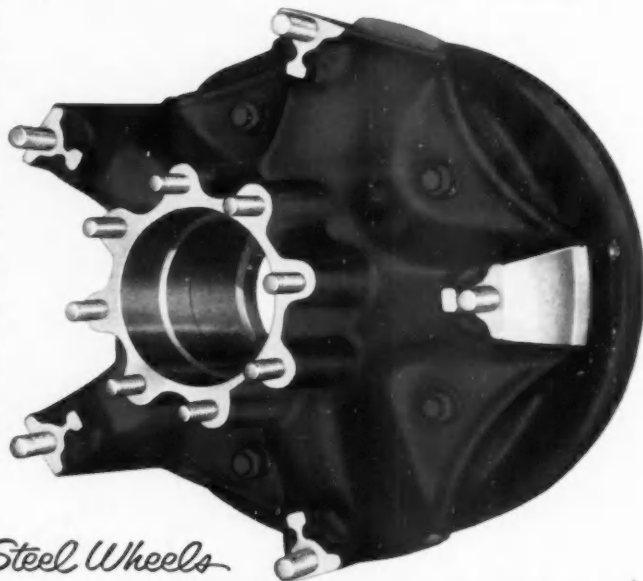


**The only truck manufacturer
not using dependable...**

Dayton made Wheels!

Dayton Spoke-Type Cast Steel Wheels are used by every heavy truck manufacturer in the U.S.A. Here are just a few of the reasons why . . .

Dayton Wheels meet the rigid specifications of truck manufacturers . . . they are lightweight to allow greater payload . . . they create a fanning action that cools tires and brakes . . . they have quick, easy rim adjustment which provides perfect alignment for longer tire life . . . and their more than 50 year history of dependable performance has won acceptance in fleets everywhere.



*Specify Dayton Steel Wheels
on your next trucks and tractors!*



cast steel wheels
brake drums



fifth wheels
landing gears



THE DAYTON STEEL FOUNDRY CO.

P. O. Box 1022, Dayton 1, Ohio

SERVING THE MOTOR TRANSPORTATION INDUSTRY OVER 50 YEARS

Proudly—we announce TIRE-LITE!

THE FIRST

EFFECTIVE

LOW TIRE PRESSURE

WARNING SYSTEM

AND, What is TIRE-LITE? A system which operates by means of an electrical circuit between a signal light on the instrument panel and a switch in the rim of the rolling wheel. As long as the tire pressure remains above 50 lbs. the signal light is "off." If for any reason the tire pressure drops to 50 lbs., or goes below, the signal light turns "on" warning the operator in time to avoid major tire damage.



TIRE-LITE has been road tested for more than a year. From this experience we have learned Tire-Lite can:

Extend Tire Life
Prevent Carcass Destruction
Obsolete the "Kick'em" Method
Lower Tire Maintenance Costs

Reduce Fire Hazards
Encourage Safer Drivers
Make Possible Faster Schedules
Increase Net Income

Three major reasons for increased Tire Maintenance costs are overloading, over inflation and **UNDER INFLATION**. You can control the first two of these before your equipment rolls. Leave the job of guarding against under inflation to Tire-Lite once your equipment gets under way.

The Tire-Lite story is an interesting one. We cannot begin to include all the facts in this announcement. We would like to visit with you and discuss how Tire-Lite can effectively lower your tire maintenance cost.

TIRE SERVICE INC.

1210 EXCHANGE BANK BUILDING

P. O. BOX 35041 • DALLAS 35, TEXAS

Without obligation, I would like to have a salesman come to see me.

Name _____

Street _____

City _____ State _____

Company _____ C-10

Fleet Courses

HERE is an up-to-date calendar of fleet training courses for 1957 and 1958. For complete addresses to write to for further information about the courses listed, see the Fleet Course Directory appearing in the November, 1956, issue, page 314.

Fleet Maintenance

Oregon State College—Nov. 5-7.

Michigan State University—Nov. 18-22.

University of Kansas (course will be held in Kansas City)—November. Montana Motor Transport Assn. (Billings)—March 17-21, 1958.

University of California (Los Angeles)—March 24-28, 1958.

University of California (Berkeley)—March 31-April 4, 1958.

Driver Training

North Carolina State College—One month long courses begin Oct. 28, Nov. 25.

Fleet supervisor

University of Oklahoma—March 17-21, 1958.

University of California (Los Angeles)—March 24-28, 1958.

University of California (Berkeley)—March 31-April 4, 1958.

Oregon State College—April 7-11, 1958 (tentative).

University of Washington—April 14-18, 1958.

Northeastern University (Mass.)—April 21-25, 1958.

Northwestern University (Ill.)—June 2-6, 1958.

Pennsylvania State University—Sept. 8-12, 1958.

Evening Courses

Northeastern University, Evening Division, will hold evening courses in the following subjects beginning on the dates shown and meeting one night a week until the end of May.

Current Transportation Problems—Jan. 27, 1958.

Traffic Management—Jan. 28, 1958.

Transportation Practices—Jan. 28, 1958.

Terminal Operations—Motor Carrier—Jan. 30, 1958.

Freight Claims for Loss and Damage—Jan. 30, 1958.

Terminal Management

Purdue University (Ind.)—Feb. 25-27, 1958.

Pennsylvania State University—Sept. 29-Oct. 3, 1958.

Top Management

Pennsylvania State University—May 14-15, 1958.

Purdue University (Ind.)—May 21, 1958.

Fleet Operation

Fleet Operation courses usually meet one night a week for about 10 or 12 weeks. Starting date, where known, is indicated below. City shown in parenthesis is where course will be held.

University of Toledo (Toledo, Ohio)—Fall, 1957 (tentative).

Rochester Institute of Technology (Rochester, N. Y.)—Fall 1957 (tentative).

University of California (Berkeley)—Fall 1957 (tentative).

University of California (Fresno)—Fall, 1957 (tentative).

University of South Carolina (Columbia)—Fall, 1957 (tentative).

Syracuse University (Syracuse, N. Y.)—Feb. 12, 1958.

Purdue University (Lafayette, Ind.)—Feb. 13, 1958.



CUPS

STILL THE BEST

...that's for sure



RIBBED CUPS
For Chrysler Products and light trucks from 1940-56.



RIBBED CUPS
For most truck installations.



RIBBED Secondary CUPS
The first improvement on Master Cylinders in 25 years! All EIS Master Cylinders are equipped with them. They're also furnished in all EIS Master Cylinder Kits.



"E" Series CUPS with EXPANDERS
A "must" replacement on all cars! Most 1956-57 cars come equipped with Expanders.



PLAIN CUPS
For those who still want them, EIS heavy-walled, wide flare plain cups are available.

EIS Cylinders work better and last longer because they're equipped with EIS Cups. And, with this great improvement, EIS Cylinders **COST NO MORE** than ordinary types.

In a few instances, EIS Repair Kits with either Ribbed Cups or "E" Series Cups cost a few pennies more—but they're well worth it! In most cases, they're **NO HIGHER IN PRICE** than ordinary kits and **EVEN LOWER** than some competitive expander-type kits.

No matter how you use EIS Cups—in EIS Cylinders or in EIS Repair Kits, you're sure of their ability to stop brake fluid leakage. That's what pays off in savings of time, money—even the lives of your customers. **THAT'S FOR SURE!**

Write for Catalog

EIS AUTOMOTIVE CORP. | Middletown, Conn.



NOW—a truck governor that regulates road speed—not engine speed

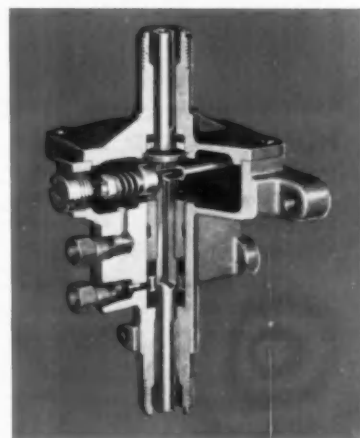
For the first time, truck fleet operators can get accurate, predetermined economy results with all trucks by having all trucks operate at road speeds which have proven most economical. The new Holley roadspeed governor is driven relative to rear wheel speed instead of relative to engine speed. It can easily be calibrated for any truck gear ratio and has been successfully tested over thousands of miles of road conditions.

The Holley roadspeed governor can be used in conjunction with the engine speed governor. Thus, if the vehicle is running in one of the lower gears and the engine reaches its governed speed

before reaching the predetermined mile per hour setting, the engine speed governor controls. In the event that road speed is reached prior to the engine rpm maximum setting, as in high gear, the roadspeed governor controls.

The roadspeed governor offers fleet operators a complete governing system designed to allow maximum horsepower under extreme load conditions and yet providing pinpoint control of road speed for maximum economy.

For more information on the Holley roadspeed governor, simply send a request on your letterhead.



The new Holley road speed governor, engineered to regulate actual road speed, is designed to eliminate mechanical trouble and prevent malfunctioning.

*For more than half-a-century
original equipment manufacturers
for the automotive industry.*

HOLLEY
Carburetor Co.

T-8

11955 E. NINE MILE ROAD • WARREN, MICHIGAN



HUMP-BACKED CARGO — Brown & Brown, Inc. of Mobile, Alabama, manufacture a wide variety of canvas goods products, and often use their own trucks for transporting raw materials to their Mobile plant. Frequently, these loads consist of irregularly shaped products that must be hauled on open top trailers, subjecting cover tarps to the most severe kind of use. For their own trucks, these experienced canvas goods manufacturers rely on huge, finely tailored tarps made from Mount Vernon duck.

This is another example of how fabrics made by Mount Vernon Mills, Inc. and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.

UNIFORMITY
Makes The
Big Difference
In Industrial
Fabrics



Mount Vernon Mills, inc.
A LEADER IN INDUSTRIAL TEXTILES

TURNER HALSEY
COMPANY
Selling Agents

Main Office and Foreign Division: 40 Worth Street, New York, N. Y.
Branch Offices: Chicago • Atlanta • Baltimore • Boston • Los Angeles

here's why...

CP TORK- MASTER*

is your best buy!

Mechanics equipped with CP Tork-Master Air-Wrenches are cutting nut turning time by 75% . . . and the time saved means extra earnings! The exclusive built-in Vari-Tork Impact Clutch with its *Controllable Power* feature requires no unwieldy or complicated torque control gadgets. You can run nuts to exact torques . . . yet have plenty of power in reserve to break frozen nuts free. *Attachable Angle Head* gets into tight spots, permits one-hand operation. And CP Tork-Masters actually cost 20% less than controllable electrics of comparable power.



* COSTS ONLY \$2.50 A WEEK
THROUGH JOBBERS PARTICIPATING
IN CP DEFERRED PAYMENT PLAN



Chicago Pneumatic

AIR AND ELECTRIC IMPACT WRENCHES • BEAD BREAKERS
PNEU-DRAULIC TRUCK JACKS AND PUMPS • ZIP-GUNS

CALL YOUR JOBBER OR MAIL THIS COUPON TODAY!
Chicago Pneumatic Tool Company, Dept. A-68
8 East 44th Street, New York 17, N. Y.

- ☐ Please arrange demonstration. No obligation of course!
☐ Please send me FREE Tork-Master literature.

Name _____

Company _____

Address _____

City _____

Zone _____

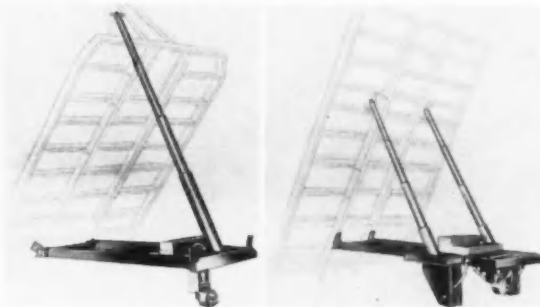
State _____

NEW

PRODUCTS

DESCRIBING RECENTLY ANNOUNCED PRODUCTS AND EQUIPMENT OF INTEREST
TO MEN CONCERNED WITH TRUCK, BUS AND CONSTRUCTION FLEET MANAGEMENT

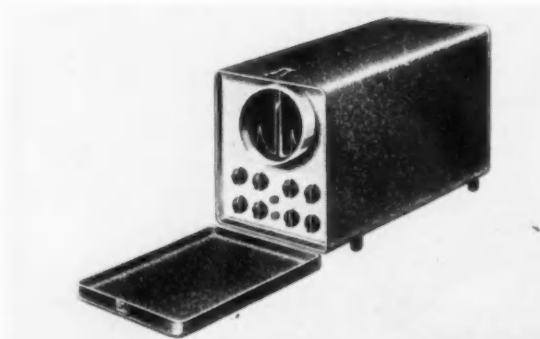
As a special service, complete address of each source is included so readers may save time—write directly for further information on products described



Telescopic Hoists

from Perfection Steel Body Co.
South East St., Galion, Ohio

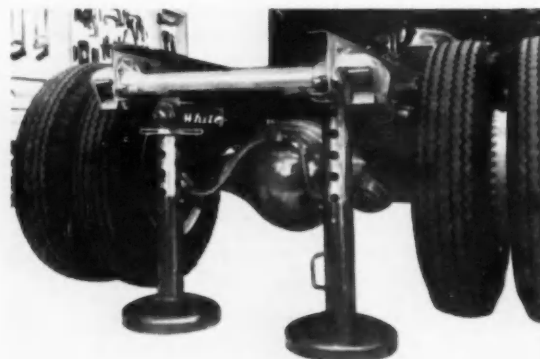
are of light-weight construction to allow additional pounds of truck payload. Called the "Micro-Tel Hoists," they utilize a new design to keep dirt and grit from scoring tube surfaces. Through the use of a wiper ring, which cleans the tubes when the bed is let down, scoring is eliminated to retain hydraulic pressure, says the manufacturer. Tube heads of the hoists are approximately twice the thickness of the tube wall section for reinforcement. They are available in both single front-mount and twin-cylinder in-or-out mount for use on either trucks or trailers of all types and capacities.



Engine Analyzer

from Snap-On Tools Corp.
8028 28th Ave., Kenosha, Wis.

provides a visual picture of the complete ignition system of an engine. Called the "Anal-O-Scope," it is for use on either battery or magneto operated systems. The analyzer shows the complete ignition cycle in the exact sequence in which it occurs, says the manufacturer. It may be operated by 110 volt current or off the truck battery and can handle 6, 12, or 24-volt systems. Snap-On Tools says analysis can be obtained of dwell or cam angle, breaker point operation, distributor wear, condenser action, primary circuit leakage, spark plug action, secondary circuit resistance, secondary circuit insulation, ignition reserve and valve action. The Anal-O-Scope is portable and comes complete with power timing light and full set of spark plug adaptors.



Heavy-Duty Truck Stands

from Jergens Tool Specialty Co.
712 E. 163 St., Cleveland 10, Ohio

are designed for heaviest trucks and buses. Called the "Perma-Jack," the truck stands are of all-steel construction with large corrugated non-slip top plate. Bottom tube extends through solid one-piece base. Model No. RS-B481-2 is for placing under frame and Model No. RS-B481-1 is for axle use.

Engine Preheater

*from Phillips Manufacturing Co.
2816 Aldrich Ave., South, Minneapolis 8, Minn.*

combines a lower wattage use with design for all-night operation in pre-heating engines. The 500-watt tank type engine heater has an extruded heating element as the "heart" of the unit, operating from 115 volt AC/DC current. Connection is made to the engine block drain. The preheater circulates and heats the engine coolant within 20 sec., says the manufacturer. It has been designated the Model No. U-500.



Tire Spreaders

*from Salsbury Corp.
1161 E. Florence Ave., Los Angeles 1, Cal.*

can handle all size tires from smallest passenger car types up to 37.5-33. Features of these spreaders include operation from standard air line, roll-up ramp to eliminate lifting tires, bench mounting and portability. The Salsbury tire spreader handles both regular and tubeless tires.



Drum Warmers

*from Harold L. Palmer Co.
2980 W. Davison Ave., Detroit 38, Mich.*

are now available in four sizes, with the addition of warmers for 16- and 14-gal (120- and 100-lb grease) drums. The 16- and 14-gal sizes come in 1500 watts, 115 volt capacities only. All models have automatic temperature control in two ranges—100°F to 450°F or 60°F to 250°F. The warmers are portable and can be taken to the point of use. They can also be used in combination with mechanical agitators.



Impact Wrench

*from Black & Decker Mfg. Co.
Towson 4, Md.*

is designed for high speed, heavy duty work. Called Model No. 300, it has a torque range of 300-450 lb ft. It has a die-cast aluminum housing, lubricant-sealed ball bearings and heat-treated gears. Powered by a Black & Decker-built motor for use on both AC and DC current (available for either 115 or 220 volt), the tool is recommended for large, heavy nut running of 3/4 in. diameter and up. The manufacturer says the wrench reaches maximum torque in six seconds.

(TURN TO NEXT PAGE, PLEASE)



New Product Descriptions

Continued from Page 211

Starting Fluid

from Wilco Co.
4425 Bandini Blvd.
Los Angeles 23, Cal.
has a new formula, says the manufacturer. Called "Surefire," it gives starts to gasoline and diesel engines

down to 65°F below zero. It is sprayed directly into the manifold or air intake from a pressurized can. Surefire also meets all ICC requirements and has been improved by the New York City Fire Dept., the manufacturer says.

Cargo Heater

from Preco, Inc.
6300 East Slauson Ave.
Los Angeles 22, Cal.
produces up to 11,000 Btu's per hour for the protection of perishable shipments. Designated as Model No. TH-



11, the heater burns methyl alcohol and is thermostatically controlled to produce temperatures from 30° to 70°F. The manufacturer says it will burn 30 hr on full flame without refuelling. It requires no outside venting, is explosion-proof and has built-in tip-over safety valves.

SPEED UP INSPECTION & REPAIR WITH THE BRANICK AIR OPERATED MODEL "M"

SPREADS WIDE OPEN
FOR FAST - EASY . . .

- INSPECTION
- INSERTING & REMOVING
TUBES & FLAPS
- SKIVING
- CEMENTING
- BUILDING
- FITTING & PACKING
AIR BAGS

HANDLES ALL SIZE TRUCK TIRES
up thru 16:00 cross section.

BUILT LOW so heavy tires can be
rolled in and out of spreader
easily.

LARGE ROLLERS aid in revolving
tire to next position.

3-WAY AIR VALVE & 5/4" CYL-
INDER provide nearly 2 tons of
spreading power on average air
line.

Time and Labor saving . . . Per-
formance Perfect . . . Branick
air-operated Tire Spreaders have
given satisfied service for over 30
years.



\$337⁵⁰ F. O. B.
FACTORY



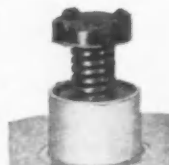
Lift Heavy Truck Axles the FASTER-EASIER way

BRANICK AIR OPERATED TRUCK JACK

EASY TO POSITION—QUICK TO RAISE for Tire
and Brake Service or Mechanical Work. Posi-
tion Jack—Raise and Lower axle in seconds
without crawling under truck body. Honed
cylinder and Oil Reservoir insure smooth action
and long life of jack. Husky 2" diameter ad-
justment screw (illustrated) gives added height
when needed. Handle
folds up when not in use.
Occupies only 14" x 25"
of floor space.

\$189⁵⁰

F. O. B. FACTORY



BRANICK MFG. CO. INC.
FARGO, BOX 1937 NORTH DAKOTA

Tire Warning System

from Tire Service Inc., P.O. Box 35041
Dallas 35, Texas

is designed to prevent tire damage
due to under inflation. Called the
Tire-Lite, the system constantly moni-
tors the rolling wheel. When tire
pressure lowers to 50 lb, an electric
circuit is completed which flashes a
red-light signal on the dash panel of
the tractor cab.



Truck Crane

from Stanco Mfg. and Sales
1931 Pontius Ave.
Los Angeles 25, Cal.

is an import from Sweden where it
was named the Hiab 170. It requires
only 15 in. of space between the cab
(TURN TO PAGE 214, PLEASE)

getting there is only half the job!

Copeland refrigeration does
the rest...keeps food fresh!



That piman Simple Simon met had tasty
enough wares when he left the bakeshop.

But it's a cinch much of the
freshness and flavor was gone when
he reached the Fair.

Today fleet operators and food
processors know freshness and profit
go hand in hand. So they
protect in-transit payloads with
refrigerated trucks equipped with
dependable Copeland units.

You can count on Copeland cooling
all the way . . . at lowest cost per mile.

WRITE FOR SPECIFICATIONS
AND PERFORMANCE DATA

SINCE 1918

Copeland
REFRIGERATION

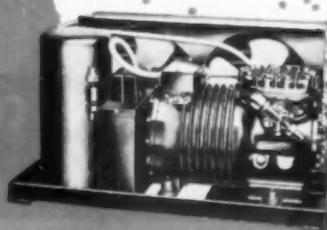
CORPORATION

Sidney, Ohio

CAPACITY Choose from $\frac{1}{2}$ to 3 H.P. in Copelametic, the direct-drive accessible hermetic, and belt-driven models. Model TR-100 shown.

DEPENDABILITY Thousands of Copeland units now in use have given years of trouble-free, over-the-road service — proof of superior engineering, ruggedness and dependability.

AVAILABILITY Our unexcelled coast-to-coast network of 130 wholesalers and over 25,000 refrigeration dealers means the best in service when you need it. It's only a phone call away.



New Products

Continued from Page 212

and truck bed, leaving the entire truck bed open for load. It is designed for operation by one man. The Hiab 170 offers a range of lifting capacities from 6000 lb on the shortened boom of 5 ft to 2500 lb on the full boom of 13 ft, says Stanco. The crane will lift up to 20 ft above ground level at a

maximum speed of 20 in. per sec. Control is from either side of the truck cab and the boom swings in a full 360° arc. Hydraulic outriggers to handle heavy loads are standard equipment.

Vehicle Lamps

from Betts Machine Co.
1800 Pennsylvania Ave., West
Warren, Pa.

are only 2 in. wide and 1 in. high and use standard SAE 3 cp No. 63 or No.



67 bulb. The oblong lamps, offered in the S-200 and S-200-2 series, are housed in aluminum die-cast bodies which do not penetrate vehicle body. Each lamp incorporates an internal "O" ring lens-to-housing seal for weather-proofing and easy lens replacement. They meet SAE and ICC requirements.

Cross Rib Tire

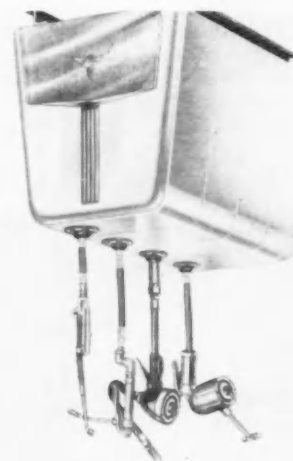
from Goodyear Tire & Rubber Co.
Akron 16, Ohio

is called the Hi-Miler and is designed for over-the-road trucking operations. The manufacturer claims it has deeper tread, angled traction bars cross-wise to the tread, submerged circumferential ribs to buttress the shoulders, and wide, open grooves. It is available in both tube and tubeless types, with carcass of nylon cord.

Lube Reels

from Lincoln Engineering Co.
5703 Natural Bridge Ave.
St. Louis 20, Mo.

are being offered in the company's new line of lubricating equipment — "Golden Standard Lubreels." The line



is available for all standard services. Reels are automatic retracting, air or spring powered. They have adjustable retraction speed, with equalized pressure control to permit adjustment of tension to operator's preference.

(TURN TO PAGE 218, PLEASE)

QUALITY CONTROL

The reason P & D parts rate highest



P & D's rigid control system starts with the raw material, follows through every step in manufacture to a triple check of the finished product. Result? — Assurance of the Quality you need for high compression engines today!

for instance — COILS

P & D makes the highest tested coil in the American market — by actual laboratory and road tests.

Coil towers of highest dielectric "PLASKON" materials — internal windings assuring greatest output, minimum brake current — insulation of special quality glazed steatite — sleeves of magneto type to insure easy starting, no miss at high speeds — silicon steel balanced for high output and no burn out at low speeds.

*In coils — as in all P & D ignition parts
this Quality Control all adds up to more
satisfied customers — more profit for you.*



MANUFACTURING CO., INC.

Established 1920

19-02 Steinway St., Long Island City 5, N.Y.

Export Sales: Borg Warner International, 36 So. Wabash Ave., Chicago 3, Ill.

**TODAY
AS
ALWAYS
America's
No. 1
Hose Clamp
Aero-Seal®**

**BREEZE
MARK**

Any good product can be imitated to sell cheaper — but trust AERO-SEAL to keep it's famous quality and satisfy both the seller and the user. Test AERO-SEALS for superior strength and holding power. Trust them for better engineering and easier operation of the precision worm gear. Notice how the worm

has no slack — won't wobble. Wide, stainless steel bands resist corrosion, tighten around hose with uniform pressure that doesn't pinch or cut. AERO-SEALS can be used again and again . . . will outlast a car! They're available in a complete size range. Why settle for less than genuine, top quality AERO-SEALS?



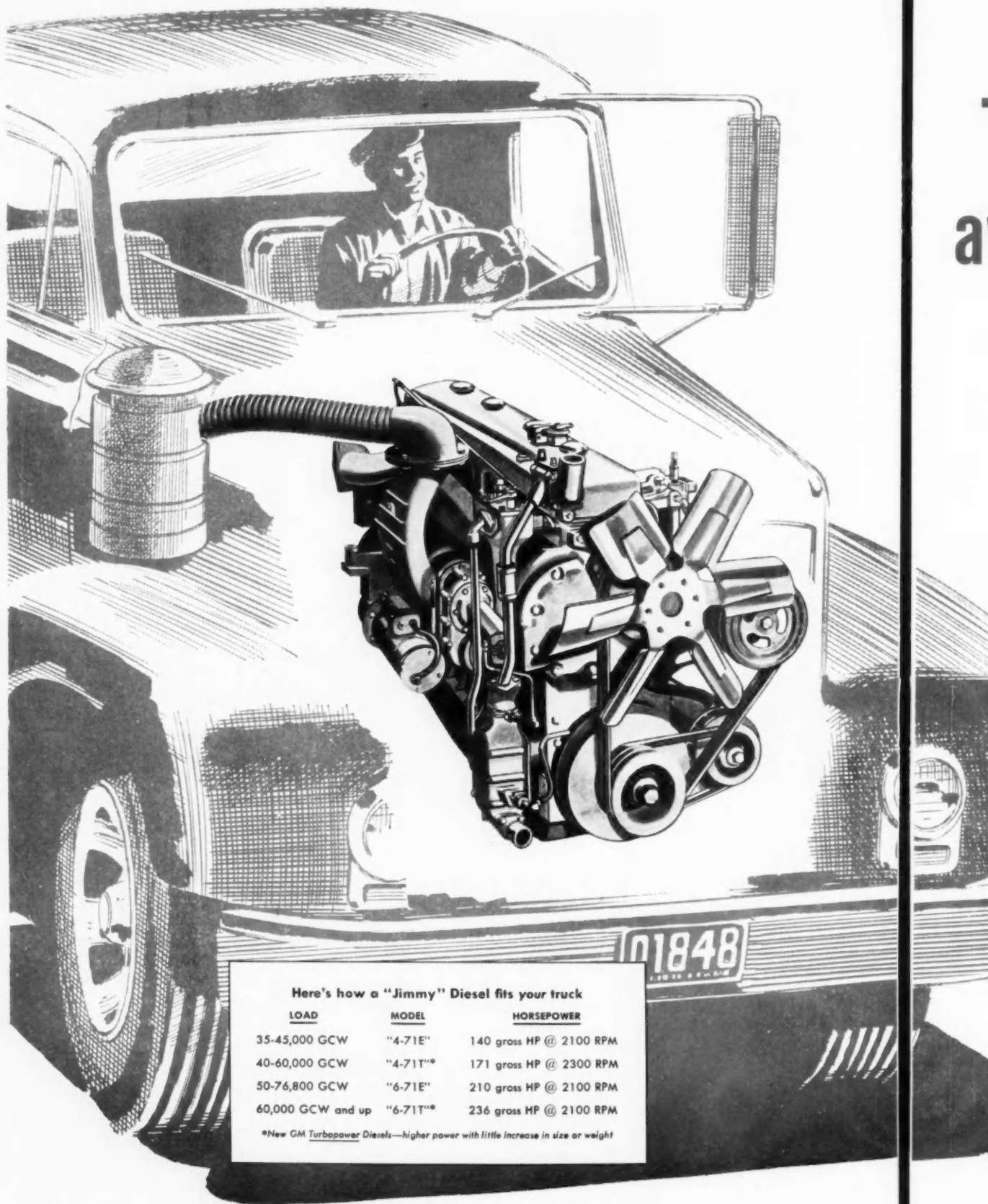
For added quick-attach advantage, get AERO-SEAL Jets. Nothing like them!

Aero-Seal

REGULAR WORM GEAR HOSE CLAMPS

BREEZE CORPORATIONS INC., 700 LIBERTY AVENUE, UNION, NEW JERSEY

COMMERCIAL CAR JOURNAL, October, 1957



Here's how a "Jimmy" Diesel fits your truck

LOAD	MODEL	HORSEPOWER
35-45,000 GCW	"4-71E"	140 gross HP @ 2100 RPM
40-60,000 GCW	"4-71T"*	171 gross HP @ 2300 RPM
50-76,800 GCW	"6-71E"	210 gross HP @ 2100 RPM
60,000 GCW and up	"6-71T"*	236 gross HP @ 2100 RPM

*New GM Turbopower Diesels—higher power with little increase in size or weight

This new "Jimmy" Diesel is available for any make truck 26,000 GVW and up

New GM "71E" Diesel can cut gasoline engine operating costs in half

This General Motors Series 71 "E" engine for trucks and buses is the newest version of the time-proved GM 2-cycle Diesel, popularly known as the "Jimmy" Diesel to users the world over.

It will save more money, perform better at speeds and last longer than any other engine on the road today—for these important reasons

- **Modern 2-cycle advantages** — more power per size and weight—*twice* as many power strokes per crankshaft revolution as 4-cycle Diesels—smoother running—faster accelerating—better high-altitude performance.
- **New 4-valve cylinder head** and 38% larger air intake capacity for improved combustion and the cleanest "breathing" known—smoke-free exhaust.
- **Unit fuel injection** — with new free-flow spray tips—more "go" per gallon—maximum output on minimum fuel.

• **Lower maintenance costs**—simpler design requires fewer maintenance hours, and maximum interchangeability of low-cost parts assures lowest costs over the life of the engine.

Here is a more compact, lighter-weight Diesel that will fit any heavy truck you own or buy—and compared to gasoline engines, *it will cut your operating costs as much as 6¢ a mile!*

See your GM Diesel distributor about repowering your present equipment. When you're in the market for new trucks, ask for this great new GM "71E" Diesel. And if the truck you choose isn't immediately available with a "Jimmy," turn your truck over to the GM Diesel distributor for a "71E" installation.

DETROIT DIESEL

Engine Division of General Motors, Detroit 28, Mich.

In Canada: GENERAL MOTORS DIESEL LIMITED, London, Ontario

Regional Offices:

New York, Atlanta, Detroit, Chicago, Dallas, San Francisco

Now—more than ever—it pays to standardize on GM Diesel



Parts and Service Worldwide

—available in 1485 applications of power equipment built by more than 175 manufacturers

New Products

Continued from Page 214

Engine Stand

from K. R. Wilson, Inc.
Arcade, N. Y.

is of tubular construction. The Wilson "Sure-Control" geared head turns heavy, off-center loads to any convenient position and allows rotation

of the engine from a fraction of an inch through 360°. It locks in any of the positions, says the manufacturer. It is available with universal and transmission adapters and has a capacity of over 1000 lb.

Color Calculator

from Arco Co.
7301 Bessemer Ave.
Cleveland 27, Ohio

is designed to help arrive at proper color mixtures for lacquer or enamel. The kits include three gages — one



for mixing in pints or quarts; one for ¼ gal or gal quantities; and the third for ½ gal. or full gals. The manufacturer says they are accurate to .00001 in. for matching colors. They work on a micrometer principle.

Reel Carrier Kit

from Truck Equipment Co.
3963 Walnut St.
Denver, Colo.

converts cable reel trailers to hydraulically operated units. The "Truco Safety" hydraulic cable reel carrier kit is especially designed for utility company use to convert PWD, PWD2, PCP or PWCP trailers which are most in use. All that is required for the conversion is for the fleetman to remove the stub axles from the old trailer, insert them in the castings furnished and hook up two wires to each brake.

Portable Truck Winch

from Hoist Division,
Burtchaeff Heating Co.,
2944 South East Powell Blvd.
Portland 12, Ore.

operates off the power of the truck storage battery without alteration of

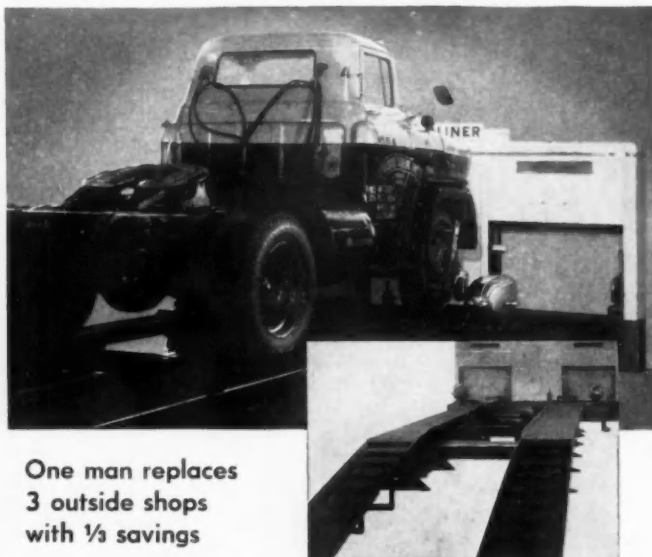


the truck's electrical system. According to the manufacturer, the winch has a 1000-lb pulling capacity at a rate of 5 ft per min. It is operated by one man.

(TURN TO PAGE 220, PLEASE)

JOHN BEAN

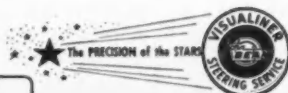
John Bean FRAME MASTER cuts fleet operator's costs and down time



One man replaces
3 outside shops
with ⅓ savings

Since installing John Bean's Frame Master, Howard Sober, Inc., Lansing, Mich., one of the nations largest vehicle haulway and driveway organizations, has one operator handling the frame work and maintenance checks originally performed by three outside shops. Trucks pulled in for checking are back on the road one to two days sooner.

With their combination John Bean truck and passenger car Frame Straightener-Visualiner installation, Howard Sober has cut wheel alignment and frame straightening costs by as much as ⅓. What's more, regularly scheduled alignment checks mean increased tire mileage for additional savings and an extra margin of safety for their fleet of over 300 vehicles.



John BEAN

LANSING 4, MICHIGAN

Division of Food Machinery and Chemical Corporation

You'll be interested in how economically you can set up your own John Bean truck wheel aligning and frame straightening department. WRITE FOR DETAILS TODAY.

USE
THIS
COUPON

send me
data on

☐ ON-THE-TRUCK Wheel
Balancer

☐ John Bean Truck and
Passenger Car Aligners

☐ Visualiner Modernizers
for existing racks

☐ John Bean Combination
Frame Straightener - Aligner

ATTACH COUPON TO YOUR LETTERHEAD OR A POST CARD

A POWERFUL LOT

You can rest assured that you have the most dependable safety equipment in the world when you are equipped with the Miro-Flex family of mirrors, reflectors, lamps, and flares. They are the favorites of everyone — from operators of "big boys" to pick-ups, because they are quality built to take the roughest treatment.

Look over the Miro-Flex line...the Miro-Flare, the original reflector flare...the mirrors which are stocked with interchangeable arms, housings, brackets, and heads, so you can have a custom-built mirror on the spot...and the new three-way combination tail light, stop and turn signals.

You will **PLAINLY SEE** why so many choose Miro-Flex!

of SAFETY by

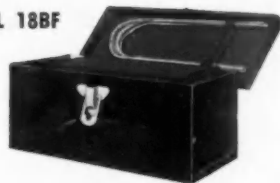
MIRO-FLEX



**MODEL 20
MIRO-FLARE**

24 candlepower with visibility for over half a mile.

MODEL 18BF



Set of three Model 18 economy Miro-Flares in box with flags and staffs.



**No. 3643
MIRROR ASSEMBLY**

6 1/2" rubber-rimmed mirror for panel trucks.



**No. 6903TA
MIRROR ASSEMBLY**

West-Coast-Type Mirror for pick-up trucks.



**No. 9908M
MIRROR ASSEMBLY**

Finest quality West-Coast-Type Mirror for heavy-duty trucks.

**No. 10763-200
MIRROR ASSEMBLY**

New 7" x 10" heavy-duty, rubber-rimmed mirror.



**No. 432
CLASS
"A"
DIRECTIONAL
SIGNAL**

combination tail light, stop and turn signal.



**No. 428
TAIL AND
STOP LIGHT**



No. 403

Armored clearance or marker lamp.

**No. 402-W
CLEARANCE LAMPS**

Available with spring, web or sprint steel mounting.



No. 418 IDENTIFICATION LAMP

Three-in-line, double-faced in red, amber, green, or clear.



**No. 409
STREAMLINED MARKER OR
CLEARANCE LAMP**

THE MIRO-FLEX CO. INC.

**1824 EAST SECOND ST.
WICHITA 7, KANSAS**

Please send me a complete catalog showing the Miro-Flex line of safety equipment.

NAME _____

ADDRESS _____

TOWN _____

STATE _____



New Products

Continued from Page 218

Leak Detector Kit

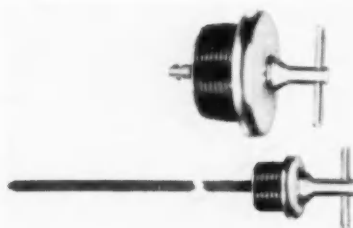
from Allen Electric & Equipment Co.
2101 North Pitcher St.
Kalamazoo, Mich.

is designed to trace the source of leaks of both water and oil. Through the use of a fluorescent dye the leak is located with an ultra-violet ray lamp. Dye for water systems is a powder and oil dye is a liquid.

Oil Filler Plug

from Moeller Mfg. Co.
2405 Durand Ave.
Racine, Wis.

gives an air-tight seal for dipstick openings and oil ports in pressurized



diesel systems, says the manufacturer. Turning the closure handle on the seal expands a rubber washer to seal the opening. Turning in reverse loosens the seal.

Battery Charger

from Willard Storage Battery
P. O. Box 6266
Cleveland 1, Ohio

has been designated Type PC-10B by the manufacturer. Designed for compactness, it features a silicon rectifier



only $\frac{1}{8}$ the size of conventional rectifiers. The charger provides charging rates of 100 amp at 6 volts and 50 at 12 volts from a case 9-1/16 x 10-7/8 x 8 in. It weighs 37 lb and is controlled by pushbuttons for low, medium and high charge rate.



West Coast Mirror

from Bolser Corp.
South Main St.
Cedar Falls, Iowa

is the same length as normal West Coast type mirrors but is only 4 in. wide. Called "The Cub," it was designed to give better forward vision by reducing "blind spots" from the cab. The mirror is adjustable from inside the cab.

(TURN TO PAGE 223, PLEASE)

**End cold weather damage
to your Gas or Diesel Engines**

INSTALL

**KIM Hotstart
electric pre-heater**



KIM HOTSTART MANUFACTURING COMPANY

West 917 Broadway, Spokane 1, Washington

KIM HOTSTART plugs into the electric circuit when engines are not in use. It draws cold water from the engine, heats it, then circulates it back through the engine. No need for heated terminals. Engines remain warmed-up; start quickly. You don't use as much fuel and spend less on repair bills. Four KIM models are available. Installation is simple. See your automotive supplier or write for literature.

SNOWED UNDER?
MONARCH Controls Your Plow
... automatically!



JEEPS



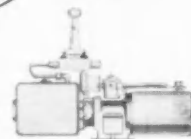
TRUCKS

POWER

**MONARCH
HYDRAULIC**

CONTROL

Snow removal is fast, dependable and safe with Monarch Power Hydraulic Control Equipment. Cab-controlled for one-man instant action, the Monarch zips snow plows into operation with ease and speed. Fan-belt driven or Electric models are available for practically all makes of vehicles. Proven in service everywhere, over 50,000 Monarch Controls have been sold. See your dealer or write for full details.



The Monarch DYNAMIGHT Model HEP (as illustrated) combines all parts in one package for ready installation on new or existing equipment.

MONARCH
ROAD MACHINERY COMPANY
1331 MICHIGAN STREET, N.E., GRAND RAPIDS 3, MICHIGAN

The man with the rig that racks up the dough says:

**"I like TOUGH joints
...I like Spicer!"**



DANA

Spicer



For over 53 years, Spicer has been the recognized leader in the development and production of universal joints and drive shafts.

For sheer guts and brute stamina, Spicer Joints and Drive Shafts are preferred for the toughest jobs the world over.

These are the features that make Spicer Joints so outstanding in service:

- ✓ Sliding splines have ground finish on ALL contact surfaces, and have extra hardness and iron manganese phosphate coating.
- ✓ True bearing alignment with rigid one-piece yoke design. This rigidity is the essence of accuracy.
- ✓ Precision bearings with improved surface hardness and finish.
- ✓ Dynamically balanced to minimize vibration.
- ✓ Uniform high quality propeller shaft tubing. Steel made to our exacting specifications.
- ✓ Wide selection of flange and yoke types and sizes to suit each individual requirement.

Ask Dana engineers, your truck dealer, or truck equipment engineer to show you physical proof of Spicer Universal Joint superiority.

DANA CORPORATION
Toledo 1, Ohio

DANA PRODUCTS Serve Many Fields

AUTOMOTIVE: Transmissions, Universal Joints, Propeller Shafts, Axles, Power-Lok Differentials, Torque Converters, Gear Boxes, Power Take-Offs, Power Take-Off Joints, Clutches, Frames, Forgings, Stampings.

INDUSTRIAL VEHICLES AND EQUIPMENT: Transmissions, Universal Joints, Propeller Shafts, Axles, Gear Boxes, Clutches, Forgings, Stampings.

AVIATION: Universal Joints, Propeller Shafts, Axles, Gears, Forgings, Stampings.

RAILROAD: Transmissions, Universal Joints, Propeller Shafts, Generator Drives, Rail Car Drives, Pressed Steel Parts, Traction Motor Drives, Forgings, Stampings.

AGRICULTURE: Universal Joints, Propeller Shafts, Axles, Power Take-Offs, Power Take-Off Joints, Clutches, Forgings, Stampings.

MARINE: Universal Joints, Propeller Shafts, Gear Boxes, Forgings, Stampings.

MANY OF THESE PRODUCTS MANUFACTURED IN CANADA BY HAYES STEEL PRODUCTS LIMITED, MERRITTON, ONTARIO

WEAVER

Super-Giant 40,000-LB. JACK

...the only hydraulic floor jack over 10 tons capacity!

40,000-lb. Capacity



Model WA-85

■ Frame High Point . . 10 1/4"	■ Length — Frame . . . 68 1/2"
■ Saddle Low Point . . 6 1/2"	■ Length — Handle . . 40"
■ Saddle High Point . . 25 1/2"	■ Length — Extended 108"
■ Total Lifting Range . 19"	■ Width—Widest Point 24 1/2"

Despite its power-packed 20-ton capacity, the WA-85 Super-Giant Jack is a model of handling ease and operating efficiency. Like all Weaver Lo-Hi-Draulic Jacks, it features the time-saving Quick-Lift Lever introduced by Weaver. This Lever, located at base of handle, can be hand operated to speed travel of saddle to load or can be foot operated to lift light loads in cramped quarters. Spring-balanced handle operates on any phase of stroke . . . stays in vertical position when not in use.

The Weaver Super-Giant Jack rolls smoothly on big roller bearing wheels and casters. Long, low slung frame with triple front wheels reaches under extreme overhangs. Saddle lifts to 25 1/2". Convenient safety lock prevents accidental lowering of load. Safety valve prevents over-loading.

1 1/4, 1 1/2, 2, 4 and 10 ton Weaver Lo-Hi-Draulic Jacks are also available. Consult your Weaver Jobber today or write us for Bulletin CCJ-461.



WEAVER MANUFACTURING CO., SPRINGFIELD, ILL., U.S.A.

WEAVER

SERVICE SHOP EQUIPMENT

Complete line includes: Twin Post Lifts . . . Triple Post Lifts . . . Single Post Roll-on, Free-Wheel and Frame Type Lifts . . . Unit Lifts . . . Bumper Lift . . . Car Washers . . . Wheel Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment . . . Jacks . . . Wheel Dollies . . . and Air Compressors.



J-M sealing compounds

Seal


*joints quickly, easily
and permanently*

Johns-Manville Body Sealers are permanently plastic synthetic resin compounds developed for sealing bolt fastened joints against the passage of air, dust, and moisture. They are highly adhesive, will not skin or harden, will not corrode metals and other surfaces, and can be painted after application. Stable under a wide temperature range, they have excellent aging characteristics.

Available in these two types:

J-M Type A Body Sealer, of relatively soft, knife-grade consistency. Supplied in 1½" and 3" dia. pugs, extruded beads (min. diameter ¼") and ribbons (min. thickness ⅛"). Recommended for use in bulk form, this body sealer can be readily extruded on the job.

J-M Type B Body Sealer, of heavier, knife-grade consistency. Supplied in 1½" and 3" dia. pugs, in beads (⅜" dia. up), and ribbons (½" up). Supplied packed in flat strips or multiple and single strand reels.

Johns-Manville Body Sealers are supplied in a variety of packages for time saving application. For Sheet EL-67A and Chart EL-72A write Johns-Manville, Box 60, New York 16, N. Y. In Canada, Port Credit, Ontario. 

Johns-Manville SEALING COMPOUNDS



New Products

Continued from Page 220

Float Valve

from Stone Brothers Buick
Department V, Box 5087
Tulsa, Okla.

has been designed with a neoprene-to-metal closure for what the manufacturer says is a more positive fit. Available for all makes and models of autos and trucks, the needle and seat (called the Carburetor Master Float Valve) is said to help starting, re-starting, acceleration and fuel economy while stopping flooding and rough idling.

(TURN TO NEXT PAGE, PLEASE)

I. C. C. REGULATION—193.25 (D)



AVAILABLE
ALSO
IN
BRACKET TYPE
MOUNTING

The Robinson Self-Lubricating

PISTON-TYPE TRAILER EMERGENCY STOP-LIGHT SWITCH

Robinson Trouble free piston
type stoplight switch conforms
to this I.C.C. Regulation.

THIS IMPORTANT LINK IN THE SAFETY CHAIN MUST NOT FAIL; the diaphragm or cylinder cup type of switch often does fail, due to the inherent weakness of the diaphragm or cup itself, which causes loss of air. THE ROBINSON LOW PRESSURE WARNING and the TRAILER EMERGENCY STOP-LIGHT SWITCHES will outlast present types many times over. They carry a FULL YEAR'S guarantee against failure. Here's why the Robinson switches are longer lasting:

CONTAIN NO DIAPHRAGMS OR CYLINDER CUPS—These new Robinson switches do not operate like present types. They use a piston-type action for much longer life. And they don't require lubrication. This is because the piston is made of a patented material that is self-lubricating, and impervious to the moisture and temperatures encountered.

ROBINSON ENGINEERING AND SALES CO.

16550 Wyoming Avenue • Detroit 21, Michigan

THERE'S NO SUBSTITUTE for LUBER-FINER'S

ENGINEERED PROTECTION



YES! IT'S WHAT'S
INSIDE
THAT COUNTS
The Efficiency of
Luber-finer's Exclusive
Patented Process
**HAS NEVER
BEEN EQUALLED!**

USE ONLY GENUINE

Luber & Finer
DIESELPAKS



Only a Luber-finer Unit
Plus a Genuine Luber-
finer Pack can give the
Exclusive Patented Fil-
tering Process that has
made Luber-finer The
Standard of The Indus-
try Since 1936!!



**THERE'S A LUBER-FINER MODEL
FOR EVERY TYPE OF ENGINE—
EVERY TYPE OF OIL!!**

LUBER-FINER PACKS AVAILABLE

1. REFINING PACK

Introduced to the public in 1935 for use with straight mineral oils, fuel oils, hydraulic oils, and inhibited industrial oils.

2. DIESELPACK

First made available in 1941, the DIESELPACK was primarily designed for use with H.D. detergent compounded oils and has also achieved outstanding results when used with fuel oils and straight mineral oils.

DON'T BE MISLED BY PRICE ALONE!

There is no substitute for DIESELPACK'S Patented Filtering Process for H.D. Compounded oils AT ANY PRICE!

The DIESELPACK cleans more oil faster—keeps it CLEAN longer—and gives more service and better engineered protection than ANY of the substitute filtering elements being offered for Luber-finer units.

IT PAYS TO GET THE BEST!

STANDARD OF THE INDUSTRY SINCE 1936

Luber-finer Units are Standard and Optional Equipment on America's Leading Diesel Trucks, Tractors, Stationary Engines.

Write for Complete Information to Dept. 11

LUBER-FINER, INC.
2514 S. Grand Ave., Los Angeles 7

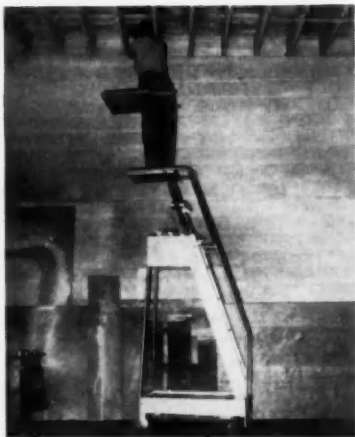
New Products

Continued from Page 223

Shop Ladder

from Rol-Away Truck Mfg. Co.
6143 South East Foster Rd.
Portland 6, Ore.

gives a 16-ft reach for working on a truck or trailer top. The ladder extensions are locked in place by double, independent locks which can only be released by the operator's using one



hand on both simultaneously. It has retractable front casters for stationary work and an adjustable leg for uneven floors. It is of welded sheet and tube steel construction, except for the aluminum upper extension carrying the workshelf and guard-rail.



Air-Power Tools

from Gardner-Denver Co.
100 Williamson St.
Quincy, Ill.

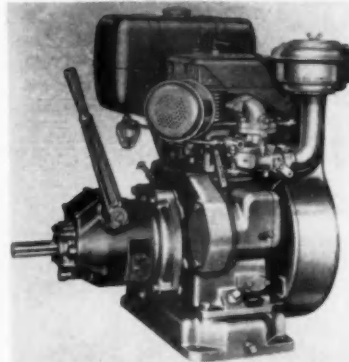
include the 12A-2 Series screw drivers and 16A-2 Series nut setters. They are powered by the new Keller Tool No. 2 air motor and have a complete speed and torque range, says the manufacturer. Of light-weight construction, they also have a body diameter of only 1½ in. They feature

interchangeable gears, spindles and chucks, one-shot lubrication with flush-type fittings, capacities up to 5/16 in.

Small Engine

from Wisconsin Motor Corp.
1910 South 53rd St.
Milwaukee 46, Wis.

is rated at 12½ hp. Designated Model AGN, the 4 cycle engine has a speed range from 1600 to 3200 rpm and a piston displacement of 38.5 cu in. According to the manufacturer, its



torque resists rpm slowdowns under sudden shock loads, prevents stalling and permits a quick power recovery.

Service ALL Diesel Nozzles ✓ BETTER

WITH THIS

**BACHARACH "Universal"
NOZZLE and INJECTOR
TEST SET**



For CUMMINS
INJECTORS

For BOSCH R, S & T,
Cat., CAV, I.H.
and similar Nozzles

For
General
Motors
51, 71
and
110
Injectors

Today's most
widely used
nozzle testing
equipment. Factory
approved by
leading engine and
equipment
builders.

Available as the "Universal Test Set" illustrated or in selective sets comprising the particular components required for testing Cummins Injectors, GM Injectors or Bosch,

etc. Nozzles. Test pump is self-priming, delivers 1200 cu. mm. per stroke, is equipped with 5000 psi gauge, 1.4 pint fuel reservoir, replaceable micronic type filter.

Mail Coupon For
FREE
Service Manual

How to
Set up
a Diesel
Fuel System
Maintenance
Shop
BUL. 686

☒ BACHARACH INDUSTRIAL INSTRUMENT COMPANY
200 N. Braddock Ave., Pittsburgh 8, Pa.
☐ Send me FREE copy of your Service Manual Bul. 686
☐ Send me Product Bul. 696 on Universal Nozzle Tester

NAME _____

COMPANY _____

STREET _____

CITY & STATE _____

NT-18

Specify
W.G.B.
...THE ORIGINAL
OIL CLAR-O-FIER
that CLEANS oil and KEEPS it CLEAN

Available for all types of oil filtration...from 60 to 750 cu. in. capacity
WRITE FOR COMPLETE DETAILS AND NAME OF NEAREST DISTRIBUTOR

W.G.B. OIL CLARIFIER, INC.
KINGSTON • NEW YORK

CLEVE-WELD'S NEW LIGHTWEIGHT 5° RIM



LIGHTER WEIGHT = LESS INERTIA = LESS MAINTENANCE

Cleve-Weld's new lightweight rim helps your trucks run more easily, earn more. Brakes, motors, transmissions last longer because they do less work starting, stopping, turning.

Cleve-Weld's new rim is three ways lighter. This means three extra ways to profit from your fleet. Strategic reductions in weight of the side-ring, rim base and drive plates cut unsprung weight. These new rims literally earn while running... not to

mention their lower initial cost versus old-fashioned heavyweights.

Cleve-Weld lightweights profit you still a third way. Trucks will have decidedly less inertia to overcome... day in, day out. The stresses and strains motors, transmissions and brakes avoid will help to prolong operating life... more than pay for the rims. For full information, write us. Or see your parts supplier.

The Cleveland Welding Company is America's leading specialist in truck rim manufacture.



CLEVELAND WELDING DIVISION
AMERICAN MACHINE & FOUNDRY COMPANY
Cleveland 11, Ohio

October News Roundup

Continued from Page 98

Williams, the association's public relations director since 1952, joined the staff of the organization in 1942 as editor of *Automobile Facts*.

Change of titles
for administrators of the President's

Committee for Traffic Safety includes the move of J. W. Bethea from "deputy director" to "executive secretary." Another innovation in the list of several proposals for administrative reorganization was the changing of the title of "secretary" of the

committee to "assistant to the chairman." This position will continue to be held by Light B. Yost.

The mayor of Magnolia, Ark., W. E. (Ed) Williamson, is the new clerk of the U. S. House of Representatives Commerce Committee succeeding E. J. Layton, who retired after more than 36 years on the job. Williamson has been a teacher and a clerk of circuit and chancery courts, and most recently he was manager of the Ford Chair Co., Magnolia.

END

Please Resume Reading Page 101

Second Quarter Intercity Truck Tonnage

By Regions

Region	Second Quarter 1957*	Second Quarter 1956*	Per Cent Change
New England	3,880	3,904	- 0.6
Middle Atlantic	15,884	15,972	- 0.6
Central	21,810	24,020	- 9.2
Southern	9,242	8,614	+ 7.3
Northwestern	4,478	4,289	+ 4.9
Midwestern	4,122	4,299	- 4.1
Southwestern	6,210	6,061	+ 2.1
Rocky Mountain	2,650	2,555	+ 3.7
Pacific	8,045	7,910	+ 1.7
United States	76,322	77,623	- 1.7

By Commodities

Commodity	Second Quarter 1957*	Second Quarter 1956*	Per Cent Change
General Freight	36,347	36,879	- 1.4
Household Goods	298	279	+ 6.6
Heavy Machinery	721	753	- 4.3
Liquid Petroleum	18,235	18,374	- 0.8
Refrigerated Solids	675	610	+ 10.7
Refrigerated Liquids	395	386	+ 2.3
Agricultural Commodities	983	868	+ 13.2
Motor Vehicles	3,212	2,776	+ 15.7
Building Materials	2,805	3,882	- 27.7
All Other	12,651	12,815	- 1.3
Total	76,322	77,623	- 1.7

* In thousands of tons. Covering 2132 ICC Class 1 and 2 intercity common and contract motor carriers of property as reported by ATA Research Dept.

Black & Decker TOOL OWNERS AGREE
Let the men who make 'em—fix 'em!



Swift Service says:
"Local Black & Decker
Factory Branch
Service
means longer life,
better performance
for your B&D Tool!"

Free Tool Inspection
Standard B&D Guarantee

Look under *Tools-Electric* in *Yellow Pages* or write us for address of nearest Factory Service Branch. **THE BLACK & DECKER MFG. CO., Dept. S4610, Towson 4, Md.**



HERE'S HOW TO REALLY CLEAN ENGINES . . . at a Profit!



HYDRO-SEAL GUNK
Carburetor
and Parts Cleaner



GUNK DEGREASER
The Original Self-Emulsifying Solvent

INSIDE . . . GUNK® Hydro-Seal is an immersion compound that strips hard carbon, varnish and gums from cylinder heads, carburetors, engine parts safely, easily and completely clean right to the bare metal. After cold immersion, parts can be rinse-cleaned with a water spray. Forms its own surface seal, preventing evaporation of solvent vapors. Hydro-Seal is the fastest-acting and most efficient self-scouring solvent for all engine parts.

AND OUTSIDE . . . GUNK Super-Concentrate is a heavy-duty degreaser and emulsifier that can be sprayed, brushed or wiped on engines and machinery and then hosed off with clear water. Result: GUNK'S self-scouring action has produced a factory-new appearance. It is one of the most remarkable and successful emulsifying degreasing solvents on the market. No toxic vapors, non-caustic, safe to skin.

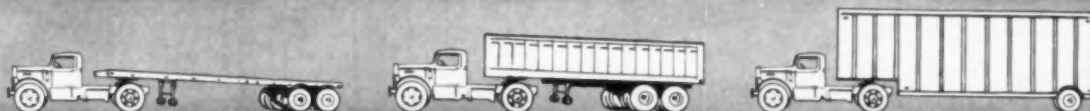
THE CURRAN CORPORATION
(Home Office) South Canal St.
LAWRENCE, MASSACHUSETTS

Plants → GUNK Chicago Company
Chicago 38 (Licensee)



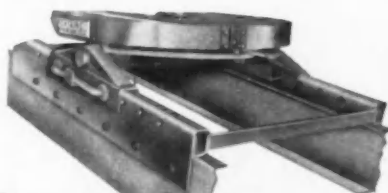


There's a Fontaine 5th Wheel



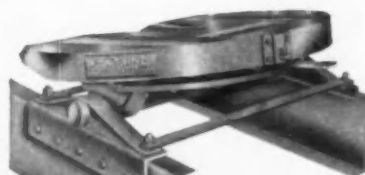
For every hauling need

This "No-Slack" 5th Wheel is a movable assembly designed to adjust weight distribution from or to the steering or drive axles. It has an adjustment of from 20" up to 6'. Completely installed it weighs only 410 pounds, and is made to fit any truck frame.



Fontaine
SLIDING WHEEL

This light-weight unit — it weighs only 295 pounds installed — has the mounting angles bolted directly to the truck frame. The complete assembly forms an additional strength member to the frame, eliminating the need for reinforcing beams. Designed to fit any truck.



Fontaine
ANGLE MOUNT



Fontaine
FRAME MOUNT

The Frame Mount "No-Slack" 5th Wheel attaches to the truck frame with two pair of heavy duty U-bolts. Installation is quick, easy. Completely assembled, this unit weighs only 280 pounds and is available in three heights. Strength and stamina are built in to stay.



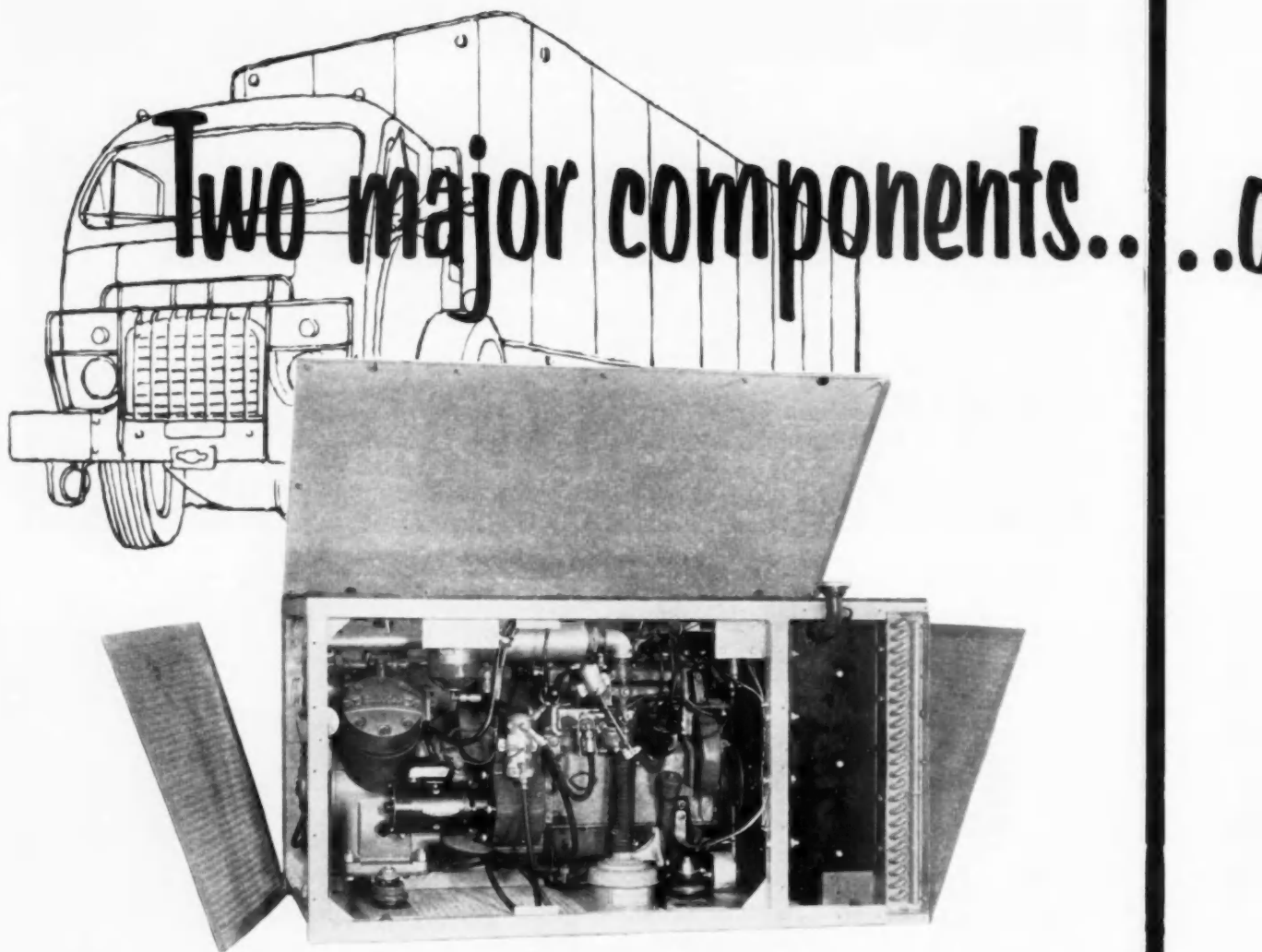
Fontaine
MOUNTING PLATE

The standard of the industry, the large, deep-ribbed mounting plates cut strain on tractor frame to a minimum. The Fontaine Mounting Plate 5th Wheel, completely assembled, weighs only 330 pounds. The wheel is guaranteed not to crack or break under any load.

Fontaine
NO-SLACK
5th WHEELS

Fontaine Truck
Equipment Co., Inc.

1232 North 37th Place • Birmingham 1, Ala.



The Power Plant...

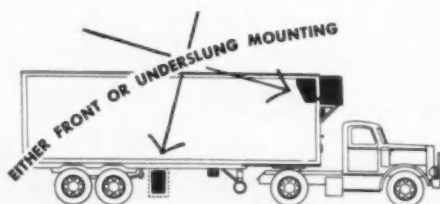
Capacities: 5 and 7½ tons refrigeration

Fuels: Gasoline, diesel or Propane (LP)

Compressor: Carrier 5F-20 or Carrier 5F-30

Refrigerant: Freon 12

Cooling Capacities: 5-ton, up to 50,000 Btu per hour, ambient air, 100°F. 7½-ton, up to 84,000 Btu per hour, ambient air, 100°F.



MOBILE REFRIGERATION / AIR CONDITIONING

*"Tropic-Aire—Carrier" is a trademark of McGraw-Edison Co., Chicago, Illinois, makers of "Toastermaster" toasters and other "Toastermaster" and "Tropic-Aire" products. Copyright, 1957, McGraw-Edison Co.

...of America's newest reefer



The Cooling System . . .

Light weight: 230 lb. (5-ton); 368 lb. (7½-ton)

Compact: All in a single unit, including blowers; Requires minimum of cargo space.

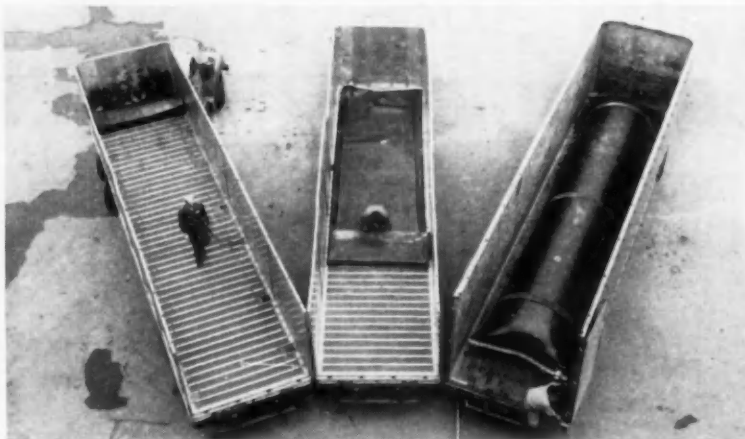
Cooling, Defrosting, Heating: Either manual or full automatic.

Controls: All encased in waterproof, dustproof housing; instantly accessible, visible to driver at all times.

McGRAW-EDISON CO. • Clark Division • 5201 West 65th Street, Chicago 38, Illinois



Giant "Toothpaste Tube" Permits Liquid Return Haul in Dry Cargo Van



DRY CARGO ONE way, liquid in bulk on the return haul is possible with a giant "toothpaste tube" being produced by United States Rubber Co. Called "Seal tank," it was shown for the first time at last month's preview of the company's new research center in Wayne, N. J.

As shown in the photo above, it's a large rubber bag that rides folded in the forward end of a trailer until needed. One man can unroll it. When filled, it is 56 in. in diameter, 35 ft long and holds 3800 gal of liquid. It weighs 1040 lb empty and its capacity when filled with molasses, for example, is 22 tons. When empty it lies flat and can be rolled into a compact, cylindrical package 25 in. in diameter and 7 ft, 4 in. wide.

It can be filled through
a fitting at one end or from the top
(Turn to page 234, please)

SAVE Time, Labor and Money



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BONDERIZED
... for extra
protection
against rust
and corrosion.

- Speed service calls—take your workshop to the job.
- Tools and parts are safe from weather and theft—easy to load, easy to find, easy to inventory.
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Morrison Steel Products, Inc.

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HERE'S WHY ... drivers and owners prefer a TIMPTE sleeper cab!

LIGHTWEIGHT! STURDY! COMFORTABLE!

The installed weight of a TIMPTE Sleeper cab is only 325 pounds, yet it is so well constructed that it is not uncommon for a TIMPTE Sleeper Cab to outlast two or more truck chassis. Payloads move **Faster and Safer**, too. TIMPTE Sleepers always provide sound restful sleep for drivers ... more profit for you!

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40th and York • Denver 5, Colorado

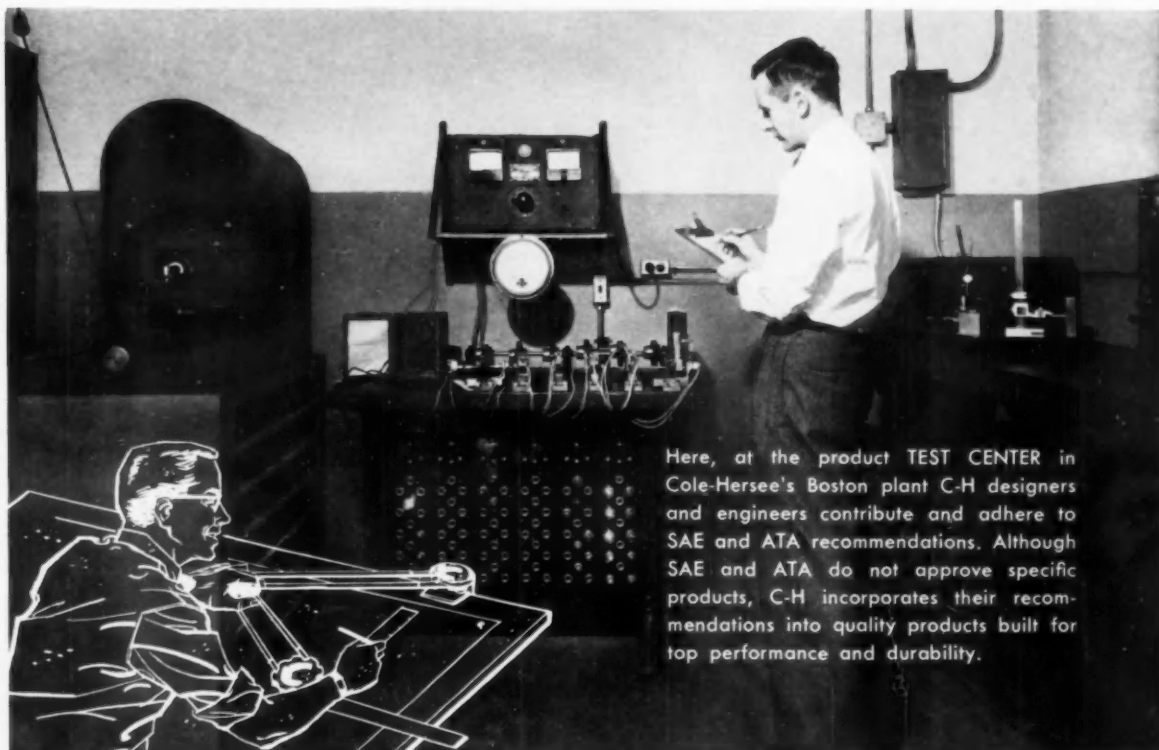


Ask the user of a Grover from 1 to 20 years or over.

Traditional Grover quality, long life & dependability.

GROVER PRODUCTS COMPANY
An affiliate of C. A. Roach Concern

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Los Angeles 15, Calif.



Here, at the product TEST CENTER in Cole-Hersee's Boston plant C-H designers and engineers contribute and adhere to SAE and ATA recommendations. Although SAE and ATA do not approve specific products, C-H incorporates their recommendations into quality products built for top performance and durability.

Specify **COLE-HERSEE NOW!**

NEW... C-H TRAILER PLUGS PROVIDED WITH WINGED GRIPS



Nos. 1253-4 pole
1254-6 pole
Nos. 1255-7 pole
1222-7 pole

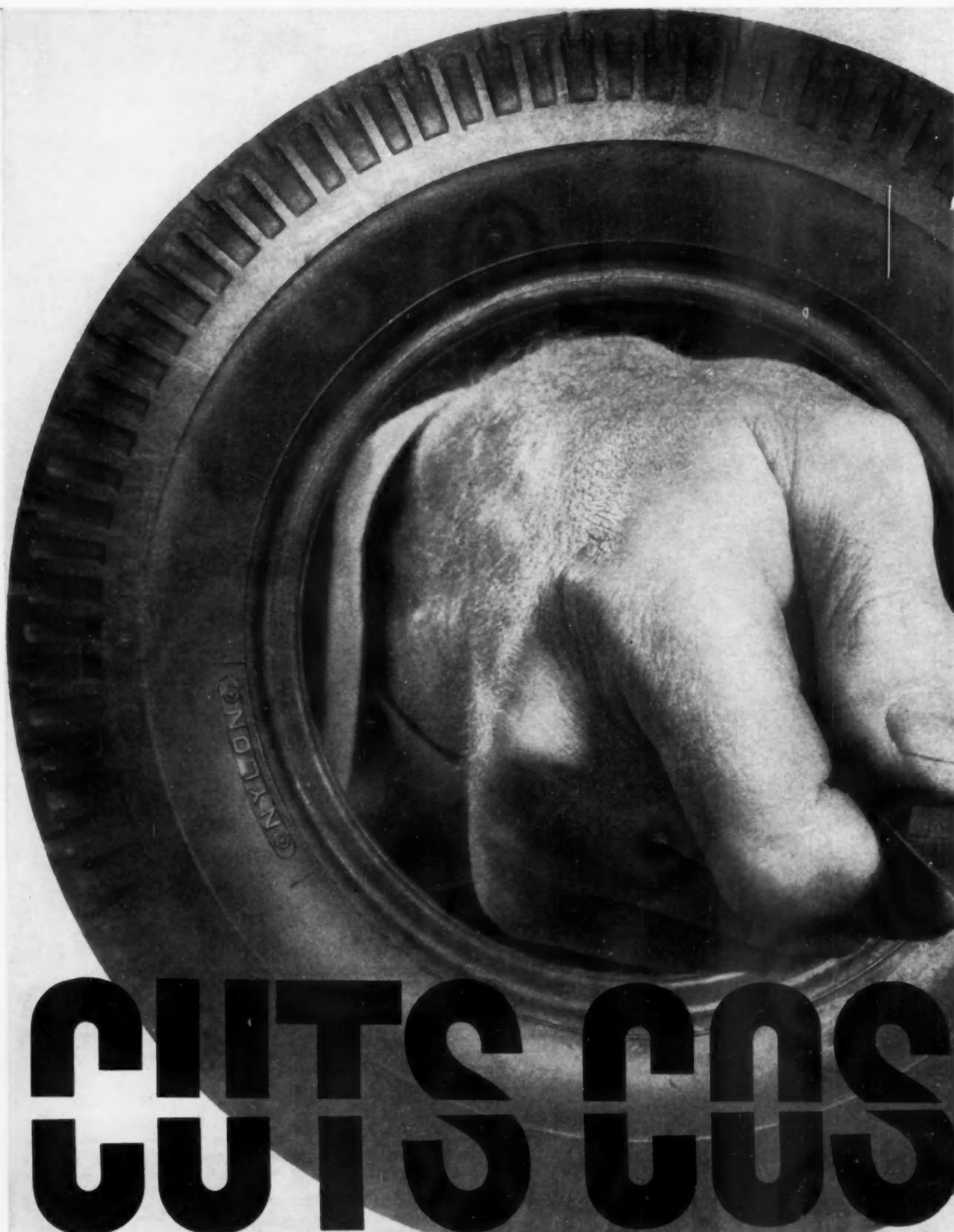
- Socket and Plug assemblies are aligned to SAE Standards for interchange ease.
- Hi-Carbon steel cable protector eliminates excess bending, fraying and chafing at plug ends.
- Rubber bumper gives plug road shock resistance and prevents short circuits.
- Integral loop on protector for hanging when unit is not used.



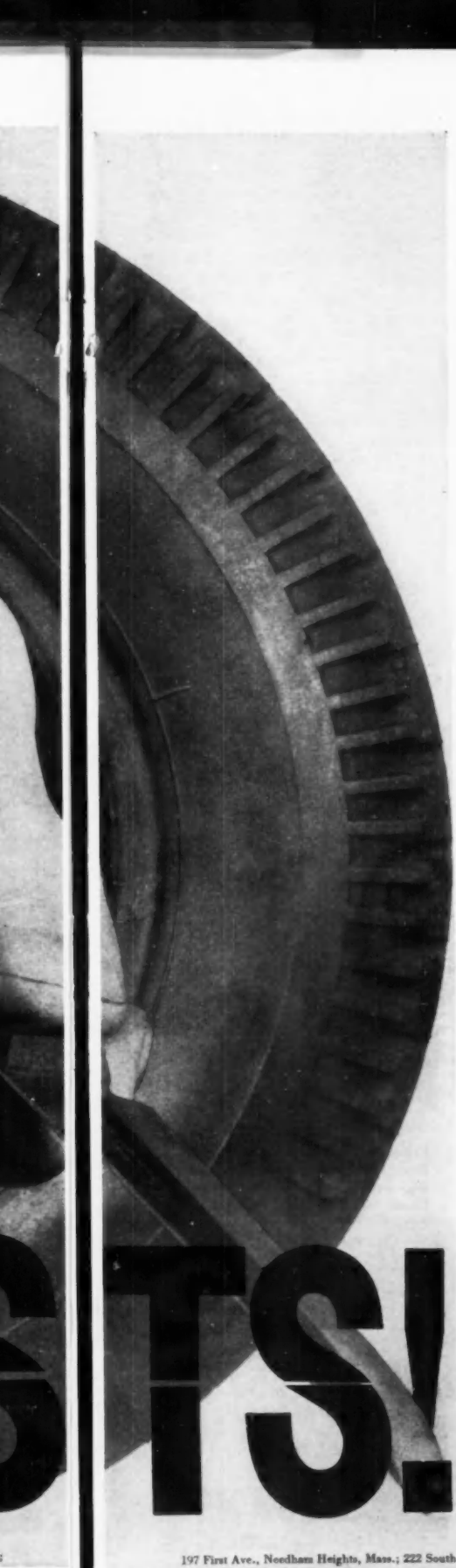
COLE-HERSEE

Over 40 Years of Consistently Better Products

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THE CHEMSTRAND CORPORATION • GENERAL SALES OFFICES: 350 FIFTH AVE., NEW YORK 1 • DISTRICT SALES OFFICES: 3 1/4 Overwood Road, Akron, Ohio;



LONG-LASTING NYLON CORD TRUCK TIRES ROLL UP MORE MILES AT LESS COST

Successful trucking is built on on-schedule deliveries. That's why truckers require tires that cut profit-robbing road delays, repairs, replacements. That's why they're switching more and more to nylon cord tires.

Nylon's the muscle fiber . . . made to take day in day out pounding, gruelling hours of heavy duty service over tough terrain. Nylon's great stamina gives truckers the priceless tire protection they need against cord-killing heat, moisture, bruises, flex breaks. Nylon cords not only clock more original mileage, but the stronger body can safely take recap after recap . . . thus cutting costs still further. No wonder more nylon cords than ever are doing the hauling on the highway.

Today, a growing share of the rugged nylon going into tire cord is the product of a major nylon yarn supplier: The Chemstrand Corporation. Produced under the stiffest quality controls, in the only completely integrated nylon plant in the country, Chemstrand nylon is as tough, durable as science can turn out . . . to make tire cord for trucks, cars, airplanes still longer-lasting, still safer-running.

Are you taking advantage of the lower operating costs made possible by today's great new nylon cord truck tires?

CHEMSTRAND® NYLON



197 First Ave., Needham Heights, Mass.; 222 South Church Street, Charlotte, N. C. • PLANTS: CHEMSTRAND® NYLON—Pensacola, Fla., ACRILAN® ACRYLIC FIBER—Decatur, Ala.

LOCATE TIRE LEAKS INSTANTLY... with **AMAZING NEW Detecto-Mist** by KEN-TOOL



Saves Time, Saves Work, Ends Messy Dunking!

Just spray tire and rim—on or off vehicle—mountains of bubbles locate leak. For all types and sizes of tires—from passenger car to the largest earthmover.



D-100
Detecto-Mist Spray Unit. Portable, 1-qt. size. Ideal for service stations. Automatic air release. Solid brass.



D-101
Detecto-Mist Spray Unit. Holds 3 gallons. Suitable for larger operations. Automatic air release.



SEE YOUR
JOBBER
for Ken
Detecto-
Mist
Solution
and
Spray
Units.

The KEN-TOOL Mfg. Co.
AKRON 5, OHIO

KINNEAR STEEL Rolling Doors

They save space; open straight upward. Surrounding space is always fully usable. All metal protection against fire, wind, theft. Any size, for trucks or buildings. Write.



KINNEAR
ROLLING DOORS
Saving Ways in Doorways

The KINNEAR
Manufacturing Co.
2100-20 Fields Ave.
Columbus 16, Ohio

for greatest
overall economy

**WAUKESHA
ENGINES**

DIESEL • GASOLINE
NATURAL GAS • LP GAS

"Toothpaste Tube"

Continued from Page 230

with whatever liquid is to be transported. Atmospheric pressure collapses the tank as it is emptied at journey's end. The flat tube again is rolled up and stored in the forward section of the trailer. Dry cargo can then be loaded in the trailer for the back haul or return trip.

The "Sealdtank" is made of four plies of rubber coated rayon tire fabric molded similar to a tire. Both ends are sealed by metal closures resembling spinal columns. Its outer surface is made of neoprene for oil and weather resistance.

Inner surface can be made of any of a variety of special rubber compounds which make possible the handling of almost any type of liquid including some highly corrosive chemicals. A polyethylene bag can be

used as a liner for the tank for handling edible liquids.

The "Sealdtank" can be made in any size to fit any trailer or truck (or railroad car, barge or ship). For trailers, the company has in production the 3800-gal container—the most practical size for the trucking industry because it permits maximum payload in most instances.

Other features of the container is that due to its flexible structure and design, it can absorb expansion and contraction of the lading without open venting. Since the "Sealdtank" collapses as it is being emptied the lading does not come in contact with air and thereby oxidation and lading degradation is eliminated.

Classified Advertisement

"Used 16 ft. Pup tag-a-long trailer. Inquire at McGill Motors Inc., Indiana, Pa., telephone 5-5644."

CAR WASHERS



AUTOMATIC
ALL PURPOSE
SYSTEM
REVOLUTIONIZES
VEHICLE WASHING

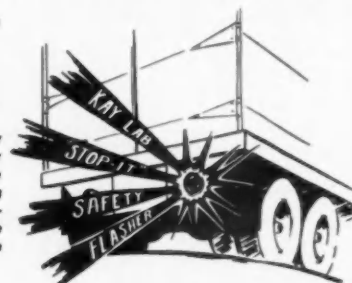
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LANSING 5 MICHIGAN

WRITE FOR
INFORMATIVE
FOLDER

BUY BONDS

"KAY LAB" FOR DEPENDABLE QUALITY PRODUCTS

KAY LAB is repeatedly the choice with every City, County and State government requiring flashing lights on emergency vehicles because only Kay Lab has the features specified.



"STOP-IT" SAFETY FLASHER

Finest flasher made. Makes lights flash on-and-off. Used for flashing warning signals and directional signals. Available in 4 types. Will flash any auto lamp to 64 candlepower, 5 amperes, standard ratings 6 or 12 Volts.



ALTERNATING FLASHER

HEAVY DUTY. Meets requirements of State Laws for alternating flashing signals. Up to 15 amperes, 6 or 12 Volts. No parts to wear out; requires no lubrication, no upkeep. Operates magnetically. Good for lights or horn signals.



Write for Folders, prices and name of nearest Jobber

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819 Valencia Street, San Francisco 10, Calif.

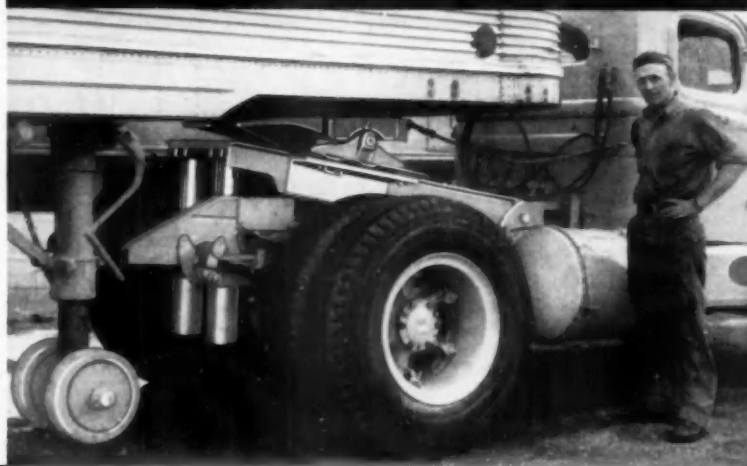


*You can see
CEMCO's working
at various terminals
of these railroads:*

New York Central
Pennsylvania
Illinois Central
Santa Fe
Erie
Alton
Southern Pacific
Milwaukee
New Haven

CEMCO

Trailer Jockey goes "Piggy-back"



CEMCO INDUSTRIES, INC.

GALION 1, OHIO

Also manufacturers of:
Mobile Machine Shops,
Loading Docks, Ramps,
Mobile Lubricating Units,
Bulk Material Carriers,
Fifth Wheel Cranes

Not surprising, really, that alert truckers think of modern CEMCO Trailer Jockeys when it's time to load trailers for a "rail ride" instead of a "road ride." At terminals of some of the nation's leading railroads listed here you'll see more and more CEMCO Trailer Jockey's at work.

As shown in the photo just above, the CEMCO puts hydraulic power under your fifth wheel—to the tune of 55,000 lbs. (37,500 lbs.—light duty) up-thrust! Has a 14" travel which is more than ample to get the landing gear up and out of the way for movement around the terminal or along the loading dock. Does in *seconds* what takes *minutes* by the old hand-cranking method.

Put CEMCO Trailer Jockey's under *your* fifth wheel and see the difference! Write for details and where you can see them at work near you! Over half of the country's big-name truckers use CEMCO's.

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ROYAL CROWN CHOOSES MEYERCORD TRUCK DECALS



Decal Truck Signs Achieve National Design Uniformity on Bottlers' Trucks

The New Nehi and Royal Crown decal program is rapidly being adopted by some 450 Nehi bottlers for their trucks and automatic vendors ... and of course Nehi chose The Meyercord Co. to make them! Nehi and Royal Crown bottlers' trucks now

provide tremendous "traveling billboard" advertising value while the standardization of Meyercord decal signs ties in most effectively with other advertising media. Whether your own fleet has ten trucks or hundreds, it will pay you to get the facts about the advantages of Meyercord Decal Truck Signs ... may we tell you about them?

THE MEYERCORD CO.

World's Largest Decalomania Manufacturers

Dept. N-515 • 5323 West Lake Street • Chicago 44, Illinois

FREE
"Ads on Wheels"
FULL COLOR
BROCHURE
Ask on company
letterhead, please.

Reduce trouble on the road ...
Lower operating costs ...
EQUIP YOUR FLEET with
the NEW Heavy Duty 3 psi model
NOW with MAGNET to trap iron oxide!



FILT-O-REG

FUEL PRESSURE REGULATOR

In stop and start traffic, on steep mountain grades, on the open highway ... **FILT-O-REG** keeps a constant even, maximum pressure on the delicate carburetor float valve and seat. Stops annoying carburetor troubles caused by over-pressure in the fuel system. And, **FILT-O-REG** reduces wear on carburetor, fuel pump and engine! Try it!

Stops FLOODING, STALLING
prevents VAPOR LOCK
gives QUICKER STARTS
increases GAS ECONOMY

• Order from your Jobber

Send for
Helpful bulletins
302
HOW
"OVER-PRESSURE"
CAUSES
CARBURETOR
FLOODING
317
YOUR ANSWER TO
VAPOR LOCK



ALONDRAS SALES, INC., 959 CRENSHAW BLVD., LOS ANGELES 19, CALIFORNIA

B.F. Goodrich



These B.F. Goodrich Traction Express tires have rolled 125,000 miles on original tread!

FROM its headquarters in St. Louis, Missouri, Allhoff Brothers, Inc., sends out 17 trucks and 4 tractor-trailers to haul feed and building materials all over the Middle West. Eight hours a day, 6 days a week, Allhoff equipment rolls over concrete and gravel roads in temperatures ranging from zero to 100°.

Those are tough conditions for any tires; but Allhoff, using B.F. Goodrich

FLEX-RITE NYLON Traction Express tires, regularly gets 125,000 miles on the original tread before retreading!

And this is *not* an exceptional case. Other users report that B.F. Goodrich Traction Express tires give them as much as 160,000 miles before retreading. That's because the Traction Express tread is 33% thicker than that of a regular tire.

And under the thick tread is the B.F. Goodrich FLEX-RITE NYLON cord body that withstands double the impact of ordinary cord materials, resists heat blowouts and flex breaks. No wonder the *all-nylon* Traction Express body outwears even the extra-thick tread, *can be retreaded over and over!*

See the Traction Express at your B.F. Goodrich dealer's. He has a complete line of tubeless and tube-type tires for every trucking job. Or write B.F. Goodrich Tire Company, A Division of The B.F. Goodrich Company, Akron 18, Ohio.

Specify B.F. Goodrich tires when ordering new trucks or trailers




"B.F. GOODRICH TRACTION EXPRESS tires have given us by far the lowest cost per mile of any tire we have ever used," reports Clay Hyder Trucking Line, Hendersonville, N. C.



"100% MORE MILEAGE than any other brand used," says Thermo-Insulation, Inc., Phoenix, Arizona, of B.F. Goodrich FLEX-RITE NYLON Traction Express Tires.



Your B.F. Goodrich dealer is listed under Tires in the Yellow Pages of your phone book



**OSCAR and
JOE SERVICE**

pull a quick switch



HOW LONG AM I GOING TO BE TIED UP WHILE YOU SWITCH TIRES, JOE?

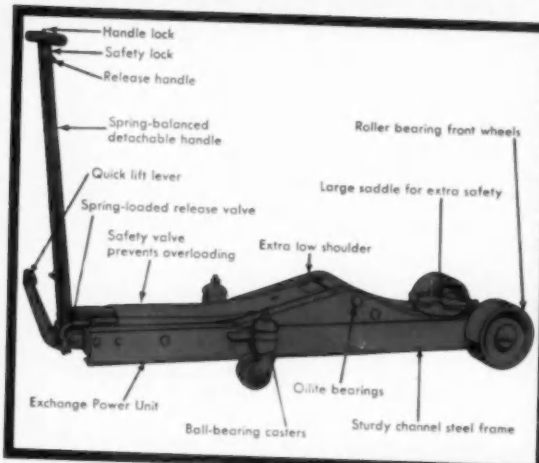
COME ON BACK AFTER LUNCH AND I'LL TELL YOU.



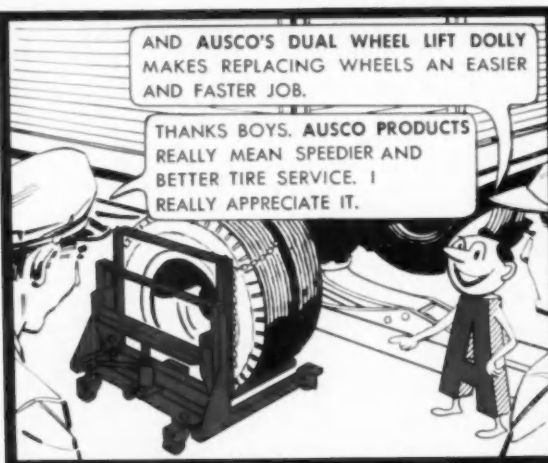
WOW! HOW'D YOU DO IT SO FAST?

LATER

WITH THIS BIG SAFE AUSCO SERVICE JACK ON THE JOB, WE CAN LIFT ANYTHING FASTER, SAFER, EASIER.



Handle lock
Safety lock
Release handle
Spring-balanced detachable handle
Quick lift lever
Spring-loaded release valve
Safety valve prevents overloading
Exchange Power Unit
Ball-bearing casters
Sturdy channel steel frame
Roller bearing front wheels
Large saddle for extra safety
Extra low shoulder
Oilite bearings



AND AUSCO'S DUAL WHEEL LIFT DOLLY MAKES REPLACING WHEELS AN EASIER AND FASTER JOB.

THANKS BOYS. AUSCO PRODUCTS REALLY MEAN SPEEDIER AND BETTER TIRE SERVICE. I REALLY APPRECIATE IT.



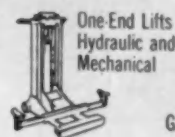
AUSCO OFFERS YOU A COMPLETE LINE OF RUGGED, SAFE AND EASY-TO-USE SERVICE JACKS. CALL YOUR AUSCO JOBBER NOW.

10 T.
4 T.
2 T.
1½ T.
1¼ T.

AUSCO Jacks

AUTO SPECIALTIES MFG. CO., INC., St. Joseph, Michigan
Other Plants in Benton Harbor and Hartford, Mich. and Windsor, Ont., Can.

AUSCO...
Manufacturers
of Quality Jacks
for every
service need!



users count the advantages- no wonder they count on FWD!



There's an important legal payload advantage in the powered front axle and special power and weight proportioning of FWD's four wheel drive!

Petroleum and milk transporters have found that advantage can be translated into 300 extra gallons of payload every trip! It's the same in other industries where FWD's famous balanced weight distribution puts up to 20% more king-pin load on the powered front axle, packs more payload into legal trailer lengths. New FWDs also save tire wear, provide as much as 82% greater traction on slippery surfaces, or in mud and snow!

87% of FWD's sales are repeat sales built on satisfaction. Why don't you join the most satisfied customers in the truck industry? Get the extra payload and safety advantages of FWD for your fleet!



Heavy-Duty Vehicle Specialists

THE FOUR WHEEL DRIVE AUTO COMPANY • Clintonville, Wisconsin • Canadian Factory • Kitchener, Ontario